US 101 Port Angeles Alternative Study

Report of Progress to Date
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Washington State Department of Transportation

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Executive Summary

The purpose of this report is to summarize and document the work and progress of the US 101 Port Angeles Alternative Study that has been made to date. The 1998 Washington State Legislature authorized the expenditure of funds to perform a preliminary project study of the US 101 corridor in the Port Angeles area. The purpose of the US 101 Port Angeles Alternative Study was to document transportation needs and deficiencies, as well as to identify potential alternatives for enhancing the long-term 20-year transportation characteristics of US 101. The study objectively assessed the existing highway capacity, safety, and access conditions as well as the future needs of the route's users.

Upon the passage of Initiative 695 (I-695) the US 101 Port Angeles Alternative Study was suspended due to the lack of funding to proceed further. This report documents the progress of the study to date. It includes the study's purpose and need, describes the criteria developed for alternative evaluation, and presents potential alternative strategies to address identified needs. It is further expected that this document will be the baseline from which to reactivate the study as funding becomes available.

Study Limits

The study area covered approximately 11 miles of Highway 101 between O'Brien Road (MP 255.11) in the east and Reddick Road (MP 244.32) in the west. The study analysis area included the Port Angeles couplet and SR 117 (Tumwater Truck Route).

Stakeholder and Public Involvement

The study was designed to provide a cooperative and collaborative process to generate community consensus on the long-range vision for US 101 in Port Angeles. To accomplish this objective, early and continuous involvement of and feedback from, local agencies, interest groups, and the general public was required.

A Study Committee was formed to guide transportation decisions and reach a common vision on issues discussed in this study. This Committee was constituted in large part of members of the general public along with representatives from local and regional agencies, business and interest groups (e.g. neighborhood groups). Individual participants are listed at the end of this report.

Two public workshops were conducted by the Project Team to solicit comments from the traveling public regarding issues or concerns that they have with the corridor and to hear their ideas about potential highway improvements.

Organization of this Report

This report includes the results of an Origin and Destination Survey conducted to determine truck traffic destined for Port Angeles as well as document truck movement within the project corridor. **Chapter 1** summarizes the background of this study, the study's purpose and need, and existing local and regional plans and studies.

Traffic information and land use are presented in **Chapter 2**. The chapter discusses the route location, its classifications, and existing conditions such as highway alignment, right-of-way, and geometric cross sections. Highway operating Levels of Service (LOS) are summarized, and tables are provided that highlight existing and future LOS forecasts for highway segments.

Prior to the development of any alternative, the goals of this study were clarified and the screening criteria were determined. **Chapter 3** focuses on these criteria and measures of effectiveness to evaluate proposed alternatives and also lists goals that were developed and adopted by the Study Committee.

Chapter 4 describes the alternative development process and the strategy categories under which potential improvement ideas were grouped.

Appendixes A through C summarize the Study Committee membership, the O&D survey, and the public involvement process.

Summary

The study was terminated after fifteen months. The Study Committee came to agreement on needs and alternative strategies that should be studied when funding becomes available. US 101 and SR 117 existing roadway segments and major intersections were analyzed using 1999 traffic volumes collected by WSDOT and the City of Port Angeles. These volumes were supplemented with 20-year (1978-1998) historical traffic data. Existing levels of service (LOS) for highway segments and intersections were determined. A 20-year (2020) prediction about future traffic volumes was performed.

The analysis showed that traffic volumes have increased at approximately a 2 percent annual rate over the past 10 years. Currently the highway route is generally operating at or better than LOS standards (D for urban and C for rural areas). Three highway segments located on or adjacent to the couplet are operating below LOS standards (LOS F). The projected growth of population and economic development in the region is expected to increase traffic congestion and degrade roadway level of service. Traffic volumes are forecasted to increase as much as 61 percent along the route by the year 2020. This increase in traffic volume results in most of the study route operating at or below level of service.

Besides congestion throughout the study route, four themes emerged from public input during the study process.

- One theme was the stretch of highway in the vicinity of Morse Creek. Morse Creek provides the only eastern access point to the Port Angeles area; there is no alternative access into Port Angeles. Safety concerns about the Morse Creek area were also expressed by the public. WSDOT has identified the three-mile stretch along Morse Creek as a High Accident Corridor (HAC).

- The second theme was the lack of dedicated pedestrian and bicycle facilities. It was noted that both study routes (US 101 and SR 117) were not conducive to pedestrian and bicycle traffic. The lack of adequate sidewalks and shoulders to accommodate non-motorized use, as well as intersection crossing conflicts were noted.

- Truck traffic was a major theme. Port Angeles is a major focal point for truck traffic for the North Olympic Peninsula, with US 101 providing the only means for truck traffic movement. Truck traffic has historically passed through the central business district, requiring through traffic to travel through the city's center.

- The other theme was that the area's aesthetic character must be preserved no matter what improvement actions are considered and/or implemented.

Although screening criteria and measures of effectiveness were developed, no evaluation process was conducted due to the curtailment of the study, nor was any environmental analysis conducted during the study. Working within the project goals, potential solutions and improvement ideas were identified during the process. These suggestions, along with the public's vision how the corridor should look, were consolidated and categorized into potential strategies by the Project Team. These preliminary alternative strategies were consolidated into categories. The committee and the team agreed that this was the logical stopping point.

The study accomplished a number of milestones, which were achieved through cooperative planning efforts, participation, and consensus from the Study Committee members. A purpose and need was developed and agreed to, evaluation criteria for improvement alternatives were established, and potential improvement strategies were identified. Upon reactivation of this study, these products should provide valuable contributions to the development of a continued study process. Prior to continuation, the determination of the environmental analysis and documentation level will be a crucial step.

No formal conclusions or solutions were made by the Study Committee. However, the committee suggested that WSDOT and local jurisdictions consider implementing some short-term, low cost operational improvements. The committee developed a list of possible operational improvements for the Department to consider. These suggestions are currently being reviewed for possible implementation.

An efficient network of transportation facilities on the North Olympic Peninsula is vital to moving people and goods. In order to assure that US 101 and SR 117 provide efficient transportation means for the future, it is important to plan for the continued growth in the region. Any future continuation of this study will require an early, consistent, continuous, and high level of public involvement. It is the desire of the Study Committee that future funding be pursued to complete this study.

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Chapter 1 INTRODUCTION

The purpose of this report is to summarize the work and progress of the US 101 Port Angeles Alternative Study that has been made to date. The intent of the study was to develop and evaluate multi-modal strategies to maintain the appropriate level of service while accommodating expected future travel demands of both people and freight along the Port Angeles portion of the Highway 101 corridor. The 1998 Washington State Legislature, through a supplemental budget, authorized the expenditure of funds to perform a study of the US 101 corridor within the Port Angeles area.

As the result of Initiative 695 (I-695), the US 101 Port Angeles Alternative Study was placed on hold because of the curtailment of funding. It is anticipated that this report will be used as a starting point when new funding is obtained.

Background

Over the past twenty years, a number of studies, reports, and other related planning efforts have addressed the existing and future mobility capabilities of US 101 and have led to input to the *State Highway System Plan.* The *State Highway System Plan* defines service objectives and action strategies to maintain, operate, preserve, and improve the state highway system over a 20-year period. The plan identifies segments of US 101 in the Port Angeles region as having mobility deficiencies, with improvement strategies calling for a need for further study. It specifically recommends further discussion with local agencies to arrive at a solution that could be programmed for future biennia. The intent of the study is to tie together the previous planning efforts by identifying the need and type of future improvements to be made to the US 101 Port Angeles corridor.

Related Planning Efforts

Washington Coastal Corridor - US 101 Corridor Master Plan (WSDOT 1997)
This plan recommends strategies for enhancements and improvements related to US 101 as they apply to the highway right-of-way only. These strategies are focused on improving the traveling experience along the highway. Strategies include interpretive strategies, to present information about the intrinsic resources of the highway, and right-of-way stewardship. The plan identifies improvement opportunities that could improve mobility, accessibility, safety, and economic development along Highway 101. Strategies include support for an alternative Port Angeles local access route, for developing an international Gateway/Multimodal Transportation Center, and for a bypass to help alleviate congestion on US 101. The plan also identifies additional improvement options: constructing park-and-ride lots; parking management; directional signage; and developing a new one-way couplet. The plan suggests that these improvements would assist in truck movement and access to the city.

Multi-Modal Transportation Center Pre-Design and Downtown Revitalization Master Plan and Summary Report (City of Port Angeles, 1997)
The City of Port Angeles has been in the process of attempting to revitalize the city's central downtown business district. This report presented a redevelopment plan based on a multimodal "Gateway Center". One of the stated goals for redeveloping the area is to improve traffic flow and parking in downtown Port Angeles. Recommended strategies include changes in signage along US 101, as well as directional changes on selected downtown city streets, including intersections with Highway 101. The document states support for an alternate east-west truck route as a long-term solution to alleviating downtown truck traffic, a "double-edged sword" problem for revitalizing the downtown area.

Transportation Services and Facilities Plan (City of Port Angeles, 1996)
This 1996 document fulfills the Port Angeles Comprehensive Plan Capital Facilities Element's requirement to develop a comprehensive Service and Facilities Plan for streets, bikeways, and walkways. The plan provides recommendations and strategies to guide the city in developing a transportation system to meet its future needs. It identifies a new east-west cross-town route, "fulfilling the City Council goal for a future alternative east/west route".

Regional Transportation Plan (Peninsula Regional Transportation Planning Organization (PRTPO), 1995)
The Regional Transportation Plan was developed in accordance with the State's Growth Management Act. This document describes the Olympic and Kitsap Peninsula's existing transportation system, establishes goals and policies to guide local transportation planning, and identifies mobility and capacity needs and suggested improvements for the region. The PRTPO supports a multimodal transportation system and promotes reducing the reliance on single occupant vehicles (SOV). The PRTPO recognizes non-motorized opportunities as being an integral part of the Regional Transportation System and encourages land development oriented towards transit and non-motorized transportation.

The plan indicates that the Port Angeles area highway/roadway system has become saturated due to the region's growth and that portions of the US 101 corridor will fail by the year 2010. To help alleviate this, the plan indicates that an alternate route around the city center would help reduce some of the congestion. The plan goes further and states that other measures such as access management, transit, transportation system management (TSM), and Transportation Demand Management (TDM) actions will also need to be implemented. As a long-term solution, the PRTPO suggests development of an alternate route using the parkway concept. In the short term, it recommends access management measures along with acceleration and merge use of two-way left turn lanes. Its final suggestion is that a study of the area will aid in identifying issues and producing alternative solutions. Regional roadway improvements recommended to address freight mobility needs as well as general purpose traffic needs include a bypass project between Port Angeles and Sequim.

Clallam County Comprehensive Plan (Clallam County, 1995)
The Clallam County Comprehensive Plan is the county's framework for coordinated and comprehensive planning. It identifies the goals and policies for issues of a countywide interest. These goals and policies are further refined in four regional plans covering the Sequim Dungeness region, Port Angeles region, Forks region, and the Straits region.

The US 101 corridor is the county's major scenic and commercial thoroughfare, and its preservation is one of the county's main goals. Policies include: reviewing traffic circulation patterns to disperse or separate traffic in congested segments; promoting commuter bicycling and maintaining bicycling facilities and shoulders along the highway; enhancing the scenic nature of the highway; and encouraging the marking of historical and cultural sites. Policies also address restricting new commercial and industrial development along US 101 that do not have county road access. Promoting consolidated access points, developing ingress/egress easements along the state highway, and developing frontage roads as a consolidation alternative are also in plan policy. For improving circulation and regional mobility of goods, services and passengers and increasing access for the Port Angeles Region, the plan recommends reviewing the need for a new highway alignment.

Port Angeles Regional Comprehensive Plan (Clallam County, 1995)
This comprehensive plan identifies specific regional policies and objectives for land uses, public facilities and services, transportation, and other elements not addressed in the countywide comprehensive plan. The regional plans provide opportunities for making local decisions consistent with countywide objectives.

Clallam County's regional 2014 vision foresees the area of Port Angeles as a transportation hub with a 'parkway' that provides an alternate east side, cross-town route for local access to Port Angeles. Within the region's urban area, the Highway 101 corridor comprises a tree-lined boulevard with landscaped medians. Neighborhood population centers are linked to a trail system allowing for efficient non-motorized transportation options, while businesses are clustered at commercial centers located at intersections of major collectors and arterials with US 101.

Objectives suggested to implement regional transportation policies include:

- The development of a new east-west local access road located south of US 101 to provide an alternate access for local residents in the eastern portion of the urban growth area.

- Rerouting truck traffic from Front and First Streets (US 101) to encourage circulation improvements within the city.
- Enhance non-motorized transportation facilities.
- Study the possibility of a new east-west route. This new roadway would preserve and enhance regional mobility, provide a local access into the urban area for local residents, and provide an emergency access in case the sole access point at Morse Creek should become impassable due to an emergency.
- Optimize the corridor efficiency through access management strategies.
- Develop a landscaped 'Gateway' at Deer Park with safe transit facilities as the east entrance to the urban growth area.
- Support the pursuit of the Port Angeles Multimodal Transportation Center.
- Improve aesthetic and serviceability of the Morse Creek area for bicyclist and pedestrian connections to the corridor.
- WSDOT to retain all properties adjoining Highway 101 and to work with the county to ensure that US 101 meets the goal that the corridor function regionally for the mobility of goods, services, and passengers.

The regional plan notes that with the completion of a new east-west route on the east side of the Port Angeles urban growth area, the circulation system of county roads in rural and resource land areas should be considered completed for this planning area.

City of Port Angeles Comprehensive Plan (City of Port Angeles, 1994)
In 1994 the City of Port Angeles developed its Comprehensive Plan in accordance with the State's Growth Management Act requirements. As with the county's comprehensive plan, land use, transportation, growth management, utilities and public services, conservation, housing, capital facilities and economic development were considered. The Transportation Element of the comprehensive plan mainly focuses on the routing of traffic within and around the city. It establishes two goals to accomplish this intent:

- "To develop a coordinated, multimodal transportation system which serves all areas of the city and all types of users in a safe, economical, and efficient manner."
- "To improve circulation patterns across and within the community."

City–identified policies to achieve these goals range from TSM and TDM measures to non-motorized facilities, along with the development of a downtown multimodal terminal. Also included are policies directed toward rerouting trucks traffic out of the downtown area. The plan further states that traffic forecasts indicate the need for an alternate route to handle general traffic through or around the city. An in-city route may accommodate growth within the 20-year time frame but may not be able to serve growth beyond this time period. Therefore, studying and pursuing a bypass of US 101 south of the city to serve increasing through traffic beyond the 20-year time frame is necessary.

Purpose and Need

PURPOSE: This study is to develop and evaluate multimodal strategies and to agree on solutions addressing existing and future transportation needs of the Port Angeles area.

NEED: A means to move both people and goods in and through the Port Angeles area in a reliable, safe, and efficient manner while respecting the community and environment.

SUPPORTING INFORMATION:

The intent of this study is to create a community generated, long-range plan for the highway corridor within the Port Angeles area. The study will consider strategies to maintain adequate level of service to meet transportation demands of both people and freight. A broad range of sustainable solutions will be considered while striking a balance with aspects the community deems important and valuable. Such valued aspects include scenic and natural beauty of the route, and links to recreational and tourist resources. Successful strategies will be consistent with existing land use, transit, and transportation policies. The need for improving access to Port Angeles and reducing traffic congestion along the US 101 corridor is identified in the *Clallam County Comprehensive Plan*, the *Regional Transportation Plan*, and *The Washington Coastal Corridor - U.S. 101 Corridor Master Plan*.

The scope of this study includes US 101 within an area stretching east from Reddick Road to the vicinity of O'Brien Road. Highway 101 provides the only east-west route across the North Olympic Peninsula. The route serves as a critical link for a variety of destinations. It is a combination of two-lane and multilane highway segments with a one-way couplet located within the City of Port Angeles. The study's analysis area also includes State Route (SR) 117. SR 117 (Tumwater Truck Route) is a two-lane highway that provides truck access to the Port of Port Angeles.

The topography of the region poses a physical challenge to the development of an effective transportation grid network. The region is cut by a series of creeks and ravines from the mountains in the south to the Strait of Juan de Fuca in the north. These steep ravines inhibit east-west circulation patterns in and around the Port Angeles Urban Growth Area (UGA). US 101 crosses all of these topographic barriers, providing the region's sole eastern access point into the urban growth area at Morse Creek. As such, it serves a potentially paramount role in disaster response. Any blocking incident occurring within this zone causes significant access problems for the region. Emergency response services are particularly concerned about the potential for isolation in case of natural disaster.

Port Angeles is a natural resource industry, manufacturing, and transportation center that relies on US 101 to ship goods and services in and out of the area. This key artery

provides a vital link to Port Angeles' water port facilities and the busiest airport on the North Olympic Peninsula. As a State Scenic and Recreational Route, it is also a major link to tourist destinations such as Hurricane Ridge, Olympic National Park, and ferry connections to Victoria, Canada. Tourist-related activities generate heavy traffic during summer months.

Heavy traffic during the summer season adds to the congestion being experienced by the region. Seasonal traffic during the June-August period increases by 9-18 percent over the average volumes. This seasonal variation demonstrates the importance of the highway as a link for tourists to recreational resources in the summer. Due to the lack of any continuous alternate through streets, traffic must rely on US 101 for destinations east and west of the city. Increasing congestion has encouraged local traffic to seek alternate routes through arterial and surface streets to avoid delays on US 101. This frequently overloads the capacity of the local street system.

Traffic volumes within the region have steadily increased over the years. Highway 101 Average Daily Traffic (ADT) volumes for 1997 range from 8,000 vehicles per day in the vicinity of Reddick and Airport Roads to 31,600 between Golf Course and Brooks Roads. The route east of the city from O'Brien Road to Golf Course Road is operating at or above current highway level of service standards. However, Golf Course Road to Race Street along both segments of First and Front Streets is operating with stop and go traffic conditions and long delays. Highway segments beginning at the intersection of Lincoln and Front/First Streets heading west to Reddick Road are operating with substantial congestion and delay in traffic movement.

Based on the 1994 City of Port Angeles and 1995 Clallam County Comprehensive Plans, county population is projected to increase from 56,464 in 1990 to 69,507 by 2010. If this growth trend continues from 2010 to 2020, the population will reach 76,028. Similarly, the City of Port Angeles' population will increase from 17,710 in 1990 to 22,081 and 25,375 for 2010 and 2020 respectively. According to current State Office of Financial Management (OFM) population determinations, both the city and county are close to or exceeding these projections. Figures show a population of 66,700 for Clallam County and 18,860 for the City of Port Angeles in 1998. The comprehensive plans anticipate slow but steady increase in employment as the economy moves from natural resource industries to tourist, retail, and service industries. Employment in the county rose from 20,680 in 1994 to 22,730 in 1998. Accompanying this population and employment growth, increased traffic congestion and degradation of roadway level of service can be anticipated. Population and employment growth also generates residential and commercial development, increasing the need for access to these areas.

Level of Service (LOS) is a measurement used to describe traffic conditions of a transportation route. This measurement compares the number of vehicles using the route with the maximum number of vehicles the route was designed to accommodate. The measurement is expressed by letters from 'A' through 'F'. LOS A represents free flow conditions, while F represents gridlock. WSDOT has set a policy goal of providing LOS

C or better for state highways in rural areas and LOS D or better for state highways in urban areas. Clallam County has adopted similar standards, as well as identifying US 101 as a tourist corridor with LOS D as a minimum requirement.

Along the study corridor by the year 2020, ADT volumes are projected to increase. A 61 percent increase over 1999 traffic volumes is projected in the vicinity of Reddick Road, while Golf Course Road volumes will increase by 36 percent. As shown in the table below, most highway segments of US 101 will be at or below the LOS standards by 2020.

Section Description	**Year**	**1999**	**Year**	**2020**
Two-lane Highway	**ADT**	**LOS**	**ADT**	**LOS**
Reddick Rd. to Airport Rd.	8000	D	12910	**F**
Airport Rd. to SR 117	10680	D	18000	**F**
SR 117 to Lauridsen Blvd.	12000	D	16850	**E**
Lauridsen Blvd. to 8th St.	8500	C	10580	D
8th St. to Beginning of Couplet (First St.)	11200	**F**	13940	**F**
Multilane Highway (Port Angeles Couplet)				
Beginning of Eastbound Couplet to Race St.	11500	C	14310	**E**
Race St. to Golf Course Rd.	18610	**F**	24190	**F**
Golf Course Rd. to End of Westbound Couplet (Lincoln)	16005	D	20805	**E**
Multilane Highway				
Golf Course Rd. to Brooks Rd.	31600	**F**	42910	**F**
Brooks Rd. to Masters Rd.	24229	C	35110	D
Masters Rd. to Deer Park Rd.	22900	B	41080	D
Deer Park Rd. to Weigh Station (Sutter Rd.)	20744	B	38820	D
Weigh Station to O'Brien Rd.	20700	B	38820	D
Two-lane Highway (SR 117 - Tumwater Truck Route)				
US 101/SR 117 I/C to Lauridsen Blvd.	3560	D	7270	**E**
Lauridsen Blvd. to Marine Dr.	6800	D	9440	D

Port Angeles is a major focal point for truck activity for the North Olympic Peninsula. Port Angeles is not supported by rail service; currently all freight is handled either by highway or water. US 101 provides the only means for highway movement of freight. Approximately 8-10% of the vehicles on US 101 and 23% of those on SR 117 are trucks. The Tumwater Truck Route (SR 117) restricted access to and from US 101 from the east forces westbound trucks to drive through the City of Port Angeles Downtown Central Business District. Heavy truck traffic in the downtown area creates conflicts with pedestrian movement, increases the noise level, and threatens the quality of life. These problems are further compounded by inadequate turning radii for trucks at most intersections in the downtown business district.

Congestion throughout the study area also contributes to traffic safety problems. Portions of the study route have been identified as High Accident Locations (HAL). HAL are locations less than 0.25 of a mile long that have a two-year history of accident rates above the statewide average for similar state highways. A three-mile stretch in the vicinity of

Morse Creek has a five-year history of higher than average accident occurrences and is identified as a High Accident Corridor (HAC). As shown in the table below, three other locations are either identified as risk reduction locations where roadway geometrics, traffic volumes, and other factors indicate a high potential for vehicles to run off the roadway, or as a Pedestrian Accident Location (PAL).

Section Description	Milepost	Category
Bean Road to Euclid Avenue	245.84 to 245.96	HAL
Euclid Avenue to SR 117	245.98 to 246.07	Risk
Vicinity US 101/SR 117 IC to Gore	246.02 to 246.18	HAL
Second Street to Chase Street	247.97 to 248.16	HAL
Vicinity Lincoln and First Street	248.05 to 248.06	PAL
Eunice Street to Chambers Street	248.59 to 248.94	HAL
Ennis Street to Alder Street	249.25 to 249.35	HAL
Larch Avenue to Short Road	251.00 to 254.00	HAC
Masters Road to Buchanan Road (Morse Creek)	251.61 to 252.95	Risk
Vicinity O'Brien Road to Shore Road	255.00 to 257.00	HAC

With few dedicated pedestrian and bicycle facilities, the mix of non-motorized traffic with motorized traffic causes safety concerns. The lack of continuous sidewalks and narrow shoulders from Ennis Street east and from Lincoln/Lauridsen west discourages the use of non-motorized transportation alternatives.

Port Angeles is a major destination on the North Olympic Peninsula and Highway 101 provides the only east-west link for the area. Existing demands in the US 101 corridor have raised concerns over levels of accessibility, congestion, safety, and the accommodation of local and regional mobility needs. The projected growth of population and economic development in the region is expected to worsen conditions unless appropriate solutions are found. The goal of this study is to develop sustainable strategies that the community agrees are sufficient to enable safe, efficient, and economical movement of people and goods within and through the region. Strategies will complement local comprehensive and transit plans and respect community and environmental competing needs.

Study Committee

A committee was formed to review, discuss, and guide transportation decisions and reach an informed consensus on preferred alternatives, which address corridor issues and concerns. This committee included representatives from city and county agencies, interest groups, and the public at large. At the first coordination meeting with local and regional agencies it was agreed that a 'one committee' concept operating as a single unit to achieve informed consensus on preferred alternatives, which address corridor issues and reduce contention with "full disclosure" of issues, was a good way to proceed. It was further agreed that the committee would be best defined as the US 101 Port Angeles Study Committee.

The Project Team, made of staff from various Washington State Department of Transportation (WSDOT) offices, provided support to the committee. The team was responsible for coordination and completion of tasks identified during the process.

Selection and Membership

Potential stakeholders were identified to participate as members of the Study Committee. Membership on the committee corresponded with stakeholders' stated level of desired involvement and potential project impacts to their specific areas of interest. In order to insure public representation on the committee, the city and county were asked to provide names of neighborhood associations based on planning sub-areas along the route. Individuals who were involved during the development of comprehensive plans and transportation studies were also identified as possible committee participants.

The following is a list of groups identified that had a potential interest in the project:

- Neighborhood Communities
- Elected and Appointed City and County Officials
- Local and Regional Agencies
- Civic Organizations
- Property Owners/Businesses adjacent to US 101/SR 117
- Users of the Road
- Olympic Air Pollution Control Authority
- Environmental "Resource Agencies" (i.e., Army Corps of Engineers, US Fish & Wildlife, National Marine Fisheries, etc.)
- Trucking Industrial Users (i.e., Daishowa, K-Ply, Crown Pacific, Admiral Marine, etc.)

It was also agreed that other groups, including the resource agencies, would be contacted for participation, as needed, depending on the environmental, land, and transportation issues that developed throughout the process.

Public Involvement

Public involvement is a key element in the planning effort. It was determined essential to the success of the study to have public involvement early and continuously throughout the process. The goal of public involvement was to inform and provide public input from the traveling public, local residents, and businesses to the Study Committee. Public involvement included public awareness of the study process and seeking concerns and suggestions from the general public. The public involvement program for the US 101 Port Angeles Alternative Study was a proactive program. To assure public input, a Public Involvement Plan was developed by the study's project team. This plan included several methods of attaining input and providing information to the Port Angeles public. The Public Involvement Program and Plan are attached as Appendix C.

Chapter 2 CORRIDOR CHARACTERISTICS/CONDITIONS

Corridor Overview

Highway 101 provides the only east-west route across the North Olympic Peninsula. The route serves as a critical link for a variety of destinations. The terrain is generally rolling, with prominent vertical and horizontal curves in the vicinity of Morse Creek. The present route provides a two-lane highway from Reddick Road east through the City of Port Angeles to the Port Angeles couplet. Along the couplet to the end of the study corridor (O'Brien Road), the highway has been developed as multi-lane highway. Right-of-way widths vary on US 101 throughout the corridor. US 101 through the City of Port Angeles has the character of a typical city street. There are many crossing streets, distracting signs, commercial entrances, traffic signals, and on-street parking.

SR 117, also known as the Tumwater Truck Route, is a two-lane highway providing truck access to the Port of Port Angeles. There are only two intersections located along the route. The truck route through the City of Port Angeles comprises US 101 north on SR 117 to Marine Drive, east on Marine Drive to the Port Angeles couplet and rejoining US 101. Most if not all trucks traveling through Port Angeles utilize this route.

Demographics

Population and economic/employment demographics and trends are useful in assessing impacts to a transportation facility. Accompanying population and employment growth, increased traffic congestion and degradation of roadway level of service can be anticipated. Population and employment growth also tend to generate residential and commercial development, increasing the need for access to these areas.

Population

The population of Clallam County has grown from 34,770 in 1970 to 66,900 in 1999, an overall increase of 92.4 percent. The county grew at a 4.04 percent annual rate from 1970 to 1980. Since 1980 the county's population continued to grow, but at much slower rate. Over the last two decades the city's population growth has been at a steady pace; during the 1990s the city experienced an annual average growth rate of 1.4 percent.

The cities of Port Angeles, Sequim, and Forks make up the incorporated areas of Clallam County. Together they represent 40 percent of the county population in 1999, with Port

Angeles being the largest -- accounting for approximately 70 percent of the incorporated population. Since 1970 most of the growth experienced by the county has occurred in unincorporated areas. From 1990 to 1999 the population in unincorporated areas rose 25 percent, while incorporated areas increased 11 percent.

Based on the 1994 City of Port Angeles and the 1995 Clallam County Comprehensive Plans, projected county population will increase from 56,464 in 1990 to 69,507 by 2010. Similarly, the City of Port Angeles' population would increase from 17,710 in 1990 to 22,081 by 2010. According to current State population determinations from the Office of Financial Management, both the city and county are close to exceeding those projections.

Table 2.1
Clallam County Historic Population

	1950	1960	1970	1980	1990	1995	1999
Clallam County	26,396	30,022	34,770	51,648	56,204*	63,600	66,900
Unincorporated	12,999	15,049	15172	28,264	32,039	37,491	40,045
Incorporated	13,397	14973	19,598	23,384	24,165	26,109	26,855
Forks	1,120	1,156	1,682	3,060	2,828	3,369	3,460
Port Angeles	11,233	12,653	16,367	17,311	17,710	18,540	18,950
Sequim	1,044	1,164	1,549	3,013	3,617	4,200	4,445

Source: *WA State Office of Financial Management*
** Corrected Census Data*

Clallam County is broken down into six sub-areas which correspond to the County's US census divisions: Agnew-Carlsborg, Clallam Bay-Neah Bay, Crescent, Forks, Port Angeles, and Sequim. As noted in Table 2.2 the Port Angeles region experienced a steady annual growth rate of .44% between 1980 and 1990. The population within the city limits of Port Angeles makes up approximately 66% of the region's population.

Table 2.2
1980-1990 Clallam County Sub-Area Growth Trends

	1980	1990	1990 % of County	Annual Growth Rate
Agnew-Carlsborg	4,825	6,310	11.17	2.72
Clallam Bay-Neah Bay	2,703	2,966	5.25	.93
Crescent	2,017	2,507	4.44	2.20
Forks	8,015	6,846	12.12	-1.56
Sequim	8,483	11,076	19.62	2.70
Port Angeles	25,605	26,759	47.39	.44

Source: *Clallam County Comprehensive Plan*

Economic and Employment

The economy of Clallam County has been, and continues to be, based heavily on natural resources, forest/lumber products, fishing, shellfish harvesting, and tourism. However, over the last quarter century a major shift has occurred in Clallam County. Emphasis of the major industries and employment has moved from producing goods to producing services. A list of business sectors, along with trends, is depicted in Table 2.3.

Table 2.3
Business by Sector
Clallam County

Industry Sector	1991	1992	1993	1994	1995	1996	1997	1998	% Change 1991-1998
Manufacturing	191	184	188	190	176	163	160	163	-14.7
Transportation & Public Utilities	128	118	117	118	117	119	114	118	-7.8
Finance, Insurance & Real Estate	124	137	134	129	135	135	133	139	12.1
Ag/Forest/Fish	80	73	71	71	76	83	87	92	15
Government	87	91	97	93	93	97	103	112	28.7
Construction	288	296	301	318	300	310	310	349	21.2
Mining	6	7	7	7	7	7	6	6	0
Wholesale	65	64	68	67	70	65	65	59	-9.2
Retail	394	399	406	409	429	433	435	440	11.7
Services	574	594	665	766	790	821	915	1,039	81
Total	1,937	1,963	2,054	2,168	2,193	2,233	2,328	2,517	29.9

Source: *WA State Employment Security Department, Labor Market and Economic Analysis Branch*

In 1970 the goods manufacturing industries (manufacturing, construction, and mining) accounted for 37 percent of employment while they only accounted for 14.9 percent in 1998. The trade and services sector accounted for 32 percent of the employment in 1970 as compared to 50 percent now. In recent years, the number of retirees in the county has risen dramatically. This growing retirement community has assisted in creating employment gains in the service sector. The leading service sector industry, in terms of employment, is health care.

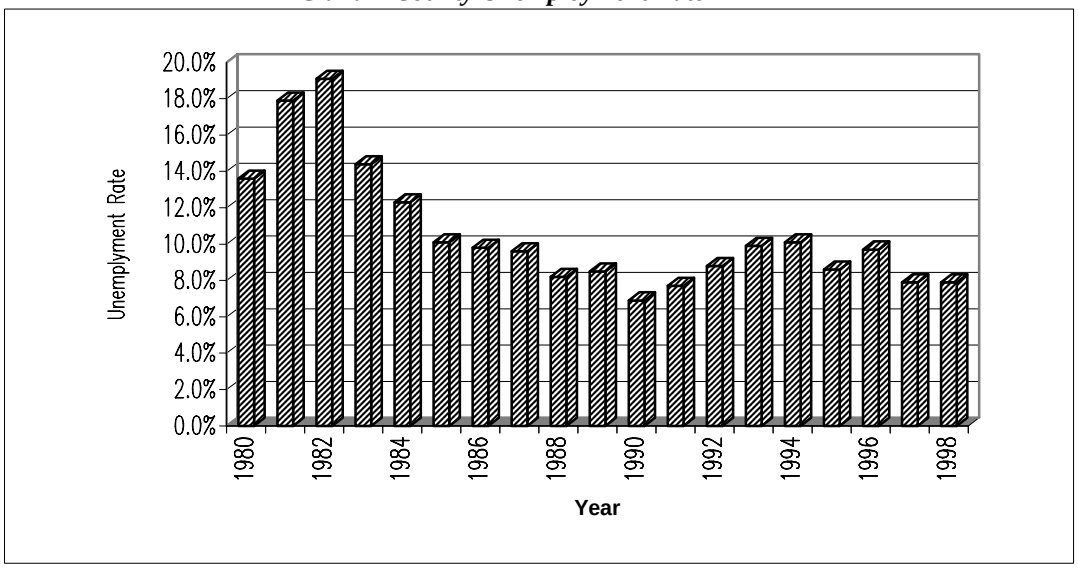
Table 2.4
Nonagricultural Employment
Clallam County

Industry Sector	1970	1980	1990	1995	1998	Change 1970-1998
Mining & Construction	490	950	1,190	1,100	1,200	710
Manufacturing	3,220	3,570	2,870	1,990	2,030	-1,190
Transportation & Public Utilities	540	860	910	720	840	300
Trade	1,920	3,370	4,590	5,090	5,370	3,450
Finance, Insurance & Real Estate	290	540	620	690	710	420
Services	1,320	2,550	3,600	4,530	4,890	3,570
Government	2,200	3,720	4,410	4,970	5,510	3,310
Total	9,980	15,560	18,190	19,090	20,550	10,570

Source: *WA State Employment Security Department, Labor Market and Economic Analysis Branch*

Though Clallam County has experienced a shift in its industry sectors, county employment has continued to grow, even when considering that the Rayonier paper mill, a major employer in the Port Angeles area, shut down in 1997. In 1997 and 1998 employment held steady with 7.9 percent of the work force unemployed in Clallam County. This was only bettered in 1990 (6.9 percent) and 1991 (7.7 percent). (Figure 2.1).

Figure 2.1
Clallam County Unemployment Rate



Source: *WA State Employment Security Department, Labor Market and Economic Analysis Branch*

Land Use

The need for land use planning and regulation increases as the demands for housing, streets, commercial and public facilities grow in the Port Angeles area. Limitations are placed on the use of land to minimize impacts to neighboring properties. Zoning regulates the locations of land uses as a means of assuring that land uses are compatible to one another. Zoning allows for control of densities in each zoning category, with the purpose of providing adequate facilities for such categories. The land use plan is a part of the comprehensive plan which is an official statement of county or city policy establishing the direction it will follow as it develops and changes.

Knowing adjacent land use along the highway corridor, traffic generated by expected development can be predicted. Land use is taken into consideration when performing traffic modeling. Information regarding present and future land use zoning along the study corridor was obtained from the city and county comprehensive plans.

The *Clallam County Comprehensive Plan* and *Port Angeles Regional Comprehensive Plan* were consulted for land use and traffic volume data. According to the plan, five general land-use designations are presently identified within the region: forestland, rural land, parks, urban, and miscellaneous uses. Forestland use identifies land suited for production of timber and is the dominant land use within the county, covering 65 percent of the area. The Olympic National Park covers approximately 27 percent of the county's land area. State, city, and county parks make up a smaller portion of park land usage.

Land Use	Total Acreage	% of Total
Forestlands	737,044	65.3
Rural Lands	56,001	5
Urban Lands	8,868	.8
Parks	312,031	27.6
Miscellaneous (Mining, schools, utilities, etc.)	15,594	1.4

Source: *Clallam County Profile 1992*

The region's urban lands include commercial and industrial uses located within the City of Port Angeles and associated urban growth area (UGA). The region experienced a slow growth rate between 1980 and 1990, with 65 percent of the decade's growth in rural areas. To reverse this trend, the plan set policies and objectives to limit urban sprawl "by allowing sufficient area within urban areas to provide for the 20 year need for residential, commercial, and industrial development". Approximately 3,800 acres of land were consolidated with the city's 6,100 acres to establish the region's urban growth area. The UGA was based on existing location of urban density, commercial activity, and industrial uses near the city boundaries.

Rural land is characterized by developed densities between one home per acre to one home per five acres. The area surrounding the city and urban growth area is primarily considered rural. The rural land along US 101 and immediately around the UGA acts as buffer to commercial forestry zoned land located further south. The land west of Port Angeles along US 101 (west of Dry Creek) is designated Rural Limited Commercial (RLC). The remaining land is classified as Rural Moderate (RM), Rural Low (LW), and Rural Character Conservation (RCC).

The Port Angeles area contains no land that qualifies as agricultural resource land of long term commercial significance. The land, however, is considered and plays a greater role as *open space* for the enjoyment of the public. Furthermore, 'rural character' in the Port Angeles Planning Region is defined as, "...a scenic patchwork of open fields and wood lots interspersed with rural homesteads...".

The *City of Port Angeles Comprehensive Plan*, dated June 1994, was also consulted for land use designation and policies. The comprehensive plan's land use policies only cover approximately 6,100 acres located within the City of Port Angeles. An additional 3,800 acres of urban growth area, approximately 2,030 acres east of the city and the remaining located south of the airport along US 101, was addressed jointly with Clallam County for future growth needs (Port Angeles Regional Plan).

The City of Port Angeles is a mixture of residential (low, medium, and high-density) commercial, industrial, and open space. Land found around Fairchild International Airport is identified mainly for industrial use. In the vicinity of the junction of SR 117 and US 101, a pocket of industrial/commercial activities can be found. There is some commercial use along SR 117, but development is very limited due to topography of the area. Predominate land usage along US 101 (the couplet and Lincoln Street) is commercial zoned land. The commercial use along Lincoln Street provides daily shopping area for residential neighborhoods in the vicinity.

Seven percent of zoned land is identified for commercial use, while fifty percent of the city land use is residential. The main residential area of the city is east and south of US 101. The city area north of the airport and beyond Tumwater Creek consists of an older residential area; it also has the largest undeveloped residential land within current city limits. Interspersed among the other land uses are open spaces, which consist of shorelines, ravines, bluffs, streams and other natural areas of significant importance to the community.

Existing Alignment and Traffic Conditions

Port Angeles US 101 Study Corridor Route Classifications

All of the state and federal highways in Washington are classified under various systems to allow for appropriate development and design standards. The following describe the various classification systems as they apply to the US 101 Port Angeles study corridor and State Route 117.

Table 2.5 at the end of this section summarizes the various State and Federal classification systems as they apply to the study corridor

National Highway System

The entire length of US 101 is designated as part of the National Highway System (NHS). The fact that US 101 is part of the National Highway System influences the level of standards applied to design elements during project development. The National Highway System (NHS) consists of highways designated as part of the Interstate System, urban and rural principal arterials, and highways that provide an intermodal transportation facility. It also includes major network connectors that provide motor vehicle access between major military installations and other highways that are part of the strategic highway network.

Functional Classification

Functional classifications play an important role in determining appropriate levels of design standards for Washington's highways. The WSDOT has subdivided all state highways into functional classifications such as Interstate, Principal Arterial, Minor Arterial, and/or Collector. Highways in each classification generally have a distinct and predominant function in serving different types of traffic and traffic generators. The objective of functional classification is to define appropriate purposes of various highways in providing service and influencing development and determining appropriate design standards.

The State Functional Classification for the study corridor along US 101 from Reddick Road in the west to the Morse Creek Bridge is designated as an Urban Principal Arterial. From Morse Creek to the ending terminus of the study corridor, O'Brien Road, is considered as a Rural Principal Arterial, while SR 117 is designated as an Urban Minor Arterial.

Scenic and Recreational Highway Systems Status

US 101 is designated as one of Washington's Scenic and Recreational Highways throughout its entire length. Washington's Heritage Corridor Program oversees the Scenic and Recreational Highways of Washington State. The preservation of the Scenic and Recreational Highways of Washington State is dependent upon successful financial and policy based partnerships between the property owners along the routes, resource management agencies, local governments, tribes, corridor advocacy groups and the public. Together these groups work for the long-term stewardship of the resources that make these routes special. Many Scenic and Recreational Highways are eligible for national recognition and potential funding under the National Scenic Byways Program. A Corridor Management Plan was completed for US 101 in 1997 (*The Washington Coastal Corridor - U.S. 101 Corridor Master Plan*).

Freight and Goods Transportation System Status

The Statewide Freight and Goods Transportation System (FGTS) is based on freight tons transported annually over various segments of the highway. Roads on the FGTS (which includes various local and county facilities) have designated classifications ranging from "T1" to "T5". Routes with a "T1" designation carry the most annual freight tonnage (over 10 million gross tons) and "T5" routes carry the least annual tonnage (over 20,000 tons in 60 days). While the FGTS is in essence a current inventory, the system is dynamic, and periodic reviews and revisions are conducted. The forces of economic growth and change can bring about a need to add or delete routes or to change route tonnage classifications. Both US 101 and SR 117 have been classified as "T-2".

Roadside Classification Plan

This class system refers to the roadside of the state route. The roadside encompasses the area between the roadway pavement edge and right-of-way boundaries. Roadside character is a description of the roadside landscape from the roadway user's perspective. It describes what you see along the road as you travel it. The *WSDOT Roadside Classification Plan* provides development guidance on issues relating to vegetation and landscaping along the route.

Table 2.5
Study Corridor Classifications

Classification System	Location MP to MP	Classification
US 101		
National Highway System Status	Entire Study Corridor	Designated as a National Highway System route
State Functional Class	244.32 (Reddick Road) to 252.16 (Morse Creek)	Urban Principal Arterial
	252.16 (Morse Creek) to 255.11 (O'Brien Road)	Rural Principal Arterial
Scenic and Recreational Highway System Status	Entire Study Corridor	Designated as a Scenic and Recreational Highway
Roadside Classification Plan	244.32 to 248.44	Rural
	248.44 to 249.64	Semi-urban - Port Angeles
	249.64 to 251.64	Urban - Port Angeles
	251.64 to 252.93	Semi-urban - Port Angeles
	252.93 to 255.11	Rural
Freight and Goods Transportation System Status	Entire Study Corridor	T2 - 4 to 10 million tons annually
SR 117		
State Functional Class	Entire Route	Urban Minor Arterial
Freight and Goods Transportation System Status	Entire Route	T2 - 4 to 10 million tons annually
Roadside Classification Plan	0.0 to 1.10	Semi-urban - Port Angeles
	1.10 to 1.40	Urban - Port Angeles

Source: *WSDOT*

Access Management Classifications

Access management is a technique for protecting the carrying capacity of highways and improving highway safety. It accomplishes these goals by minimizing disruptions to through traffic by eliminating unnecessary driveways and spacing them, managing the roadway median, spacing traffic signals, and managing turning traffic, as well as other measures.

Access control is established to preserve the safety and efficiency of specific highways and to preserve the public investment. Control is effected by acquiring rights of access from abutting property owners and by selectively limiting approaches to the facility. Facilities thus controlled are termed limited access or access controlled highways.

Limited Access (full, partial, or modified access control) in general means abutting lands have right of access or only limited access rights to limited access highway. The access control criteria are described below.

Controlled Access in general means access is regulated by the government entity having jurisdiction over the transportation facility. Table 2.7 summarizes the access control classifications as adopted by WSDOT through state legislation. Factors that were considered in developing the classifications are traffic volume, speed limit, adjacent land use, functional classification, and existing access density. Table 2.8 describes the existing access management classifications for the study corridor.

Table 2.7
WSDOT Access Control Classification System

Class	Functional Characteristics	Posted Speed (MPH)	Median	Planned Intersection Spacing	Minimum Private Connection Spacing
1	High speed, high traffic volumes, long trips serving interstate, interregional, and intercity travel. Service to abutting land subordinate to service of major traffic movements.	50 and up	Restrictive	1 mile	1,320 ft.* One per parcel
2	Medium to high speeds, medium to high traffic volumes, medium to long trips serving interstate, interregional, and intercity travel. Service to abutting land subordinate to service of major traffic movements.	Urban 35 to 50 Rural 45 to 55	Multilane; Restrictive	0.5 mile	660 ft.* One per parcel
3	Moderate speeds, moderate traffic volumes, short trips serving intercity, intracity, and intercommunity travel. Balance between land access and mobility. Used where land is less than maximum buildout, but development potential is high.	Urban 30 to 40 Rural 45 to 55	Multilane; Restrictive	0.5 mile	330 ft.
4	Moderate speeds, moderate traffic volumes, short trips serving intercity, intracity, and intercommunity travel. Balance between land access and mobility. Used where level of development is more intensive and major land use changes are less likely than on Class3.	Urban 30 to 35 Rural 35 to 45	Non-Restrictive	. 0.5 mile	250 ft.
5	Low to moderate speeds, moderate to high traffic volumes, short trips serving intracity and intercommunity travel. Service of land access dominant function.	25 to 35	Non-Restrictive	. 0.25 mile	125 ft.

Source: WAC 468-52-040
*Private direct access to the state highway shall not be allowed except when the property has no other reasonable access to the general street system.

Table 2.8
WSDOT Access Management for

US 101 Port Angeles Study Corridor

Section Description	Current Access Classification	Speed Limit	Land Use*	Terrain Type
US 101				
MP 244.32 to 246.74 Reddick Road to Port Angeles East City Limit (vic. Pine St.)	Class 2	45 - 55	Urban	Rolling
MP 246.74 to 249.89 Port Angeles East City Limit to West City Limit (including couplet)	Class 4	25 - 35	Urban	Rolling
MP 249.89 to 255.11 Port Angeles West City Limit to O'Brien Road	Partial Control**	40 - 55	Rural	Rolling
SR 117				
MP 0.00 to 1.40 Junction US 101 to Marine Drive	Class 3	40	Urban	Rolling

Source: WSDOT *Access Management Plan (for highway class only)*

** Land Use designations were taken from the Clallam Co. Comprehensive Plan.*

*** Partial access control may be established when warranted on highways other than Interstate. Partial control provides a considerable degree of protection from traffic interference and protects the highway from future strip-type development.*

Existing Right-of-Way

A review of the right-of-way (ROW) plans for US 101 and SR 117 indicates that there are many variations in ROW width to accommodate slopes, road approaches, bridges and other features. Existing ROW widths generally vary from 40 feet to 300 feet plus along the route. The 300 feet plus right-of-way located along a two mile section in the vicinity of Morse Creek is a large slide control area.

Existing Surface Geometrics

Information regarding the configuration of existing lanes and shoulders is provided in Table 2.9. Descriptions include dimensions of lanes, shoulders, and sidewalks, lane functions such as General Purpose (GP) and Two-way Left-turn Lane (TWLTL). There are no High Occupancy Vehicle (HOV) Lanes established or planned for US 101 or SR 117. Milepost locations are used to identify where significant changes occur, such as the number of existing lanes, or where any other significant change in the geometry occurs. The information is presented to represent the conditions along the corridor in a general sense.

Table 2.9
US 101 Corridor Existing Surface Geometrics

Section Description	MP	Traffic Lanes	Shoulders & Sidewalks
US 101			
Vicinity Reddick Road to East City Limits	244.62-246.74	1 through lane each direction with 11-12 foot two-way-left-turn lanes	4 to 7 foot asphalt in sections
East City Limits to First Street	246.74-248.06	2 through lane each direction with occasional 11-13 foot turn lanes	Curb, no shoulders
First Street to Golf Course Road (includes one-way couplet)	248.06-249.651	2 through lane each way 2-3 through lanes on WB couplet (Front St.)	Curb, no shoulders
Golf Course Road to O'Brien Road	249.65-255.11	2 through lane each direction with occasional 11-13 foot turn lanes	Curb, no shoulders
SR 117			
US 101 IC to 8th Street Bridge	0.00 to .99	1 through lane each direction 30 foot soil median unprotected with guide posts vicinity of bridge	4 foot asphalt shoulders on both sides
8th Street Bridge to 3rd Street	.99 to 1.33	1 through lane each direction	4 foot asphalt shoulders on both sides
3rd Street to Marine Drive	1.33 to 1.40	1 through lane each direction	Curb, no shoulders

Source: *WSDOT State Highway Log, 1998*

Bridges and Structures Inventory

There are four bridge structures within the limits of the study corridor. These bridges are identified in Table 2.10. There are no bridges along the US 101 Port Angeles couplet. The 8th Street bridge which crosses over SR 117 is owned by the City of Port Angeles.

Table 2.10

Bridges and Structures

Bridge Number	Mile Post	Crossing Name	Length (ft.)	Width (ft) Curb-to-Curb	Built Year
US 101					
101/340	246.63	Black Diamond	138	39.4	1998
101/350	252.16	Morse Creek	188	78	1968
SR 117					
117/1	0	US 101 Under Crossing	128	19	1956
117/5	.97	SR 117 Over Crossing (8th St.)	738	24	1935

Source: *Washington State Department of Transportation, 1999 Bridge List*

Existing Traffic Signals

The following table provides information relating to existing traffic signals on US 101 and SR 117.

Table 2.11
SR 101 Existing Traffic Signal Locations

INTERSECTING STREET NAME	Mile Post	Speed Limit (MPH)
US 101		
Lauridsen Blvd.	247.12	30
E. 8th Street	247.46	30
E. 5th Street	247.77	30
E. 1st Street	248.06N	35
Front Street	248.06S	25
Peabody Street	248.25	35
First & Race Street	248.75N	35
Front & Race Street	248.75S	25
First & Ennis Street	249.25N	35
Front & Ennis Street	249.25S	25
Golf Course Road	249.63	35
First & Del Guzzi	249.70	40
Monroe Road	250.38	40
Mt. Pleasant Road	251.06	40
Oakridge Drive	251.53	40
SR 117		
Marine View Drive	1.40	40

Source: *Washington State Department of Transportation*

Existing Transit Service

Bus Service

Clallam Transit provides fixed-route bus service, paratransit, charter and special services along the study corridor. Bus service provides intra-city and inter-city service to Port Angeles. Fixed-route service is divided into three types:

Fixed-route Urban

The five urban fixed routes are intra-city routes that service the City of Port Angeles: Route 20 - College/Plaza; Route 21 - College Connection; Route 22 - Lincoln/Peabody; Route 24 - Cherry Hill; and Route 26 - West Side.

Fixed-route Inter-city

There are two inter-city routes that connect Clallam County cities: Route 14 - Forks and Route 30 - Hwy. 101 Commuter (commuter service to Sequim). Transit service is also provided to Seattle from Port Angeles via Jefferson and Kitsap Transit connections.

Fixed-route Rural

Clallam Transit operates seven routes that service the rural communities of the county.

Park and Ride

Clallam Transit uses four park and ride lots, none of which are located in the study area. The nearest one is located at Laird's Corner at the intersection of US 101 and SR 112.

The Port Angeles International Gateway Transportation Center is a joint development project between Clallam Transit and the City of Port Angeles and is currently under way. The project is developing a multi-modal center that will provide Clallam Transit with a central transfer point in downtown Port Angeles.

Accident History

Table 2.12 summarizes information on the location of accidents, accident severity (property damage, injury, and fatality), the 1996 accident rate, and a multi-year (four years 1992-1996) accident rate for segments of the study corridor.

Table 2.12
Accident Statistics

MP	Beginning of Section	Length in Miles	Avg. Daily Traffic	PDO*	Injury	Fatal	Total	Accident Rate	
								1996	Multi Year
US 101									
244.32	Reddick/Cameron Rds	1.77	10,800	6	2	0	8	1.1	1.9
246.09	Doyle Rd.	1.47	10,300	12	9	0	21	3.8**	3.8**
247.56	8th St.	2.07	14,900	54	38	0	92	8.2**	7.1**
249.63	Jct. Golf Course Rd.	1.38	30,700	21	16	0	37	2.4**	2.5**
251.01	Larch Ave.	4.11	21,400	24	23	0	47	1.5	1.4
255.11	O'Brien Rd.	6.13	15,200	26	9	0	35	1	1.1
SR 117									
0	US 101	0.29	3,450	0	0	0	0	0	0.2
0.29	Lauridsen Blvd.	1.11	6,600	4	4	0	11	4.1**	1.9

Source: *1996 Washington State Accident Report*

* Property Damage Only

** Segments that exceed that statewide accident rate

Highway safety is a very important issue for all routes. WSDOT established a safety service objective in the *State Highway System Plan* to address safety issues through

improvement strategies. Safety strategies are categorized into collision reduction and collision prevention improvements.

Collision Reduction

High Accident Locations (HAL) are spot locations typically less than 0.25 of a mile long that have a two-year history of accident rates above the statewide average for similar state highways. Five have been identified along the study corridor.

High Accident Corridors (HAC) are one mile or longer stretches of highway that have a five-year history of higher than average accident occurrences. There are two within the study corridor limits.

Pedestrian Accident Locations (PAL) are locations that have a higher than average occurrence of pedestrian accidents. Pedestrian accidents locations are a tenth-of-a-mile long and have a five-year history of three or more pedestrian accidents.

Collision Prevention

Risk Reduction are locations where roadway geometrics, traffic volumes, and other factors indicate a high potential for vehicles to run off the roadway.

Table 2.13 summarizes the various safety strategy locations. No HAL or Risk Reduction locations have been identified along SR 117. However, the busy intersection of SR 117 and Lauridsen Boulevard experiences the highest rate of accidents along SR 117.

Table 2.13
Accident Location Summary

Section Description	Milepost	Category
Bean Road to Euclid Avenue	245.84 to 245.96	HAL
Euclid Avenue to SR 117	245.98 to 246.07	Risk
Vicinity US 101/SR 117 IC to Gore	246.02 to 246.18	HAL
Second Street to Chase Street	247.97 to 248.16	HAL
Vicinity Lincoln and First Street	248.05 to 248.06	PAL
Eunice Street to Chambers Street	248.59 to 248.94	HAL
Ennis Street to Alder Street	249.25 to 249.35	HAL
Larch Avenue to Short Road	251.00 to 254.00	HAC
Masters Road to Buchanan Road (Morse Creek)	251.61 to 252.95	Risk
Vicinity O'Brien Road to Shore Road	255.00 to 257.00	HAC

Source: *Washington Department of Transportation*

Existing Traffic Conditions

Existing conditions were determined through historical and current traffic counts and standard analysis techniques to establish a base of information. This baseline analysis of existing traffic conditions documents the traffic and service characteristics of the present US 101 and SR 117 alignments.

Weekday traffic volumes were obtained from WSDOT and the City of Port Angeles automatic counts undertaken during July and August 1999. Traffic counts were taken at various locations along the study route from O'Brien Road to Airport Road. Traffic counts were further supplemented with historical traffic data obtained from the WSDOT Transportation Data Office. This data provided the Study Committee with current data regarding vehicle travel demand along US 101 and SR 117.

Traffic Volumes

The existing average daily traffic (ADT) on US 101 ranges from as low as 8,000 to as high as 31,600 (Table 2.14). The highest ADT (31,600) occurs on the segment of highway at Golf Course Road prior to the couplet. The lowest ADT (3,560) occurs on SR 117 just north of the US 101 and SR 117 interchange. Truck traffic percentages range from 5.17 percent to 23 percent. The highest truck percentage of 23 percent occurs along SR 117; this is expected since the highway serves as a truck route for the city. The lowest truck traffic of 5.17 percent occurs on Lincoln Street from 8th Street to First Street.

These percentages were confirmed by a truck Origin and Destination (O&D) survey conducted by the study Project Team. The purpose of the survey was to determine truck traffic origin and destination within the Port Angeles area (Appendix B). Highway 101 is the only major thoroughfare for traffic in and around Port Angeles. All of the surveyed traffic passing through Port Angeles continue to utilize what is historically known as the city truck route, of which SR 117 is a major segment. This route consists of city streets passing through the central business district from the US 101 portion of the Port Angeles couplet and connecting with SR 117.

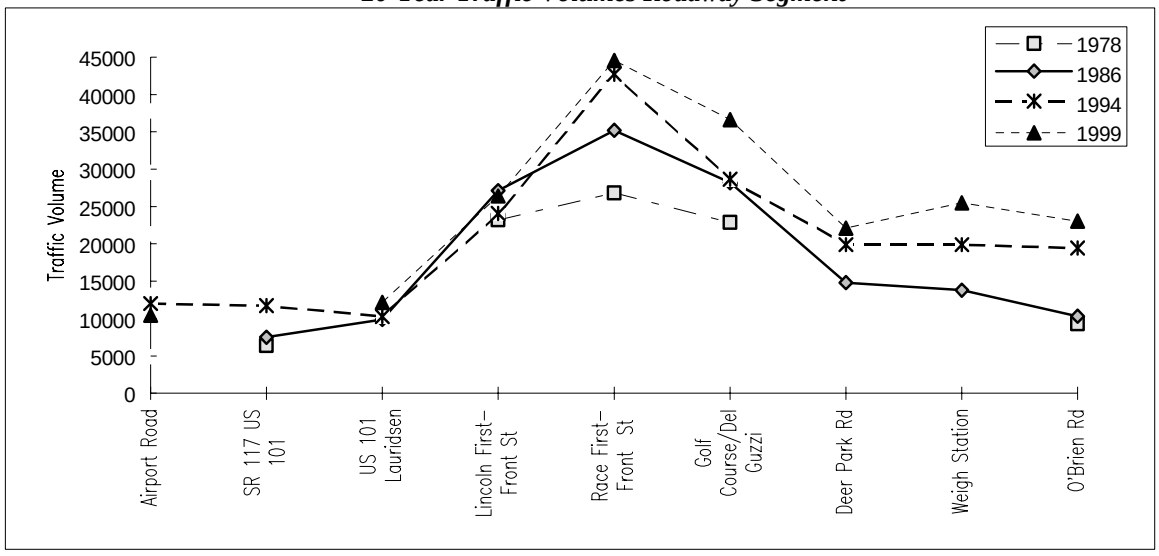
Within Port Angeles itself freight truck traffic is generally destined for the city port area and the area located west of the city along Highway 101. The truck route is the main route used by westbound truck traffic to access these two main destination hubs. Mainly trucks for local deliveries use Lincoln Street, which is the north-south leg of US 101 within Port Angeles.

Historical Traffic Trend

Traffic volumes within the region have increased over the years. Figure 2.2 depicts traffic volumes along the corridor over a twenty-year period (1978-1999). It demonstrates that the traffic volume has continually increased. From 1986 to 1994 traffic grew at an average annual growth rate of 2.96 percent, while traffic grew from 1994 to 1999 at a rate of 2.22 percent.

Trends also indicate that most of the traffic has consistently increased on the eastern portion of the Port Angeles area, where most of the growth occurred in the recent past with the couplet carrying the heaviest traffic. Based on historical data there appear to be slower growth rates on the western portion of the study corridor. This is in part due to the fact that Port Angeles is a major destination with little traffic passing through Port Angeles from the east.

Figure 2.2
20-Year Traffic Volumes Roadway Segment



Source: *WSDOT Transportation Data Office*

Seasonal Fluctuations

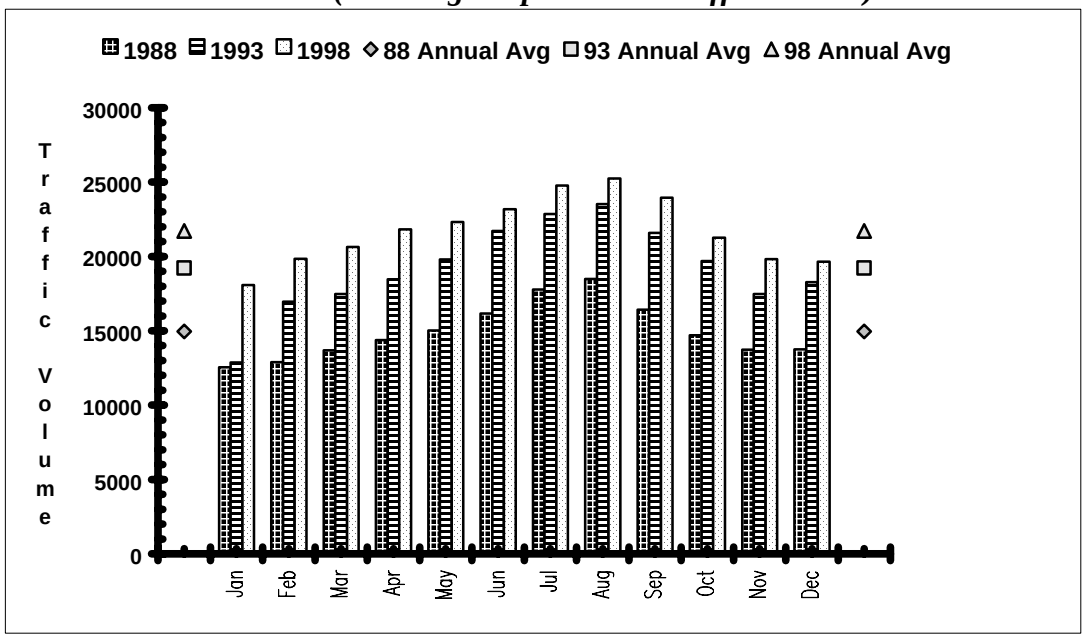
Data on monthly traffic volume variation was obtained from the WSDOT permanent count station location, counter RO69, located along US 101 at the Washington State Patrol Weigh Station (Milepost 254.8) for the years 1988 to 1998. The results are summarized graphically on Figure 2.3.

Heavy traffic during the summer season adds to the congestion being experienced by the region. Seasonal traffic during the June-August period increases by 9-18 percent over the average volumes. January volumes are the lowest, with traffic volumes in April and October closest to the annual average.

In every year, the average daily traffic increases during the months of June, July, and August, corresponding with the peak tourist season, with the month of August having the most traffic. This demonstrates the importance of the highway as a link for tourists to recreational resources during summer.

WSDOT uses the permanent count stations to determine the growth of traffic within the different regions of the state. Figure 2.3 further demonstrates that traffic has grown over the 10 years that the counter has been in operation.

Figure 2.3
Traffic Seasonal Fluctuations
(Port Angeles permanent traffic counter)



Source: *WSDOT Transportation Data Office*

Level of Service

The highway segment analysis was performed to determine the operational levels of service of the existing traffic conditions along the study corridor. The results are discussed in this section. The *Highway Capacity Manual* and associated software were utilized to analyze traffic operations of highway segments and unsignalized intersections. In the analysis of highway segments, the traffic volumes and associated factors used were based on actual traffic counts.

Level of Service (LOS) is a measurement used to describe traffic conditions of a transportation route. This measurement compares the number of vehicles using the route with the maximum number of vehicles the route was designed to accommodate. The measurement is expressed by letters from 'A' through 'F'. LOS A represents free flow conditions, while F represents gridlock. WSDOT has set a policy goal of providing LOS C or better for state highways in rural areas and LOS D or better for state highways in urban areas. Clallam County has adopted similar standards, as well as identifying US 101 as a tourist corridor with LOS D as a minimum requirement.

During the peak hours of traffic, the most congested locations along the study corridor occur from 8th Street to the couplet and at an approximately two mile section of highway east from Race Street at LOS F. The length of Highway 101 from Reddick Road to the SR 117 interchange is near capacity with LOS D, approaching LOS E. The majority of the rest of the highway and SR 117 is operating at capacity or better.

Table 2.14
Existing LOS for Highway Segments

Section Description	ADT	Truck %	LOS
US 101			
Two-lane Highway			
Reddick Rd. to Airport Rd.	8000	16.43	D
Airport Rd to SR 117	10680	12.2	D
SR 117 to Lauridsen Blvd.	12000	7.07	D
Lauridsen Blvd. to 8th St.	8500	5.17	C
8th St. to Beginning of Couplet (First St.)	11200	5.17	**F**
Multilane Highway (Port Angeles Couplet)			
Beginning of Eastbound Couplet to Race St.	11500	5.18	C
Race St. to Golf Course Rd.	18610	5.18	**F**
Golf Course Rd. to End of Westbound Couplet (Lincoln)	16005	5.18	D
Multilane Highway			
Golf Course Rd. to Brooks Rd.	31600	5.18	**F**
Brooks Rd. to Masters Rd.	24229	5.18	C
Masters Rd. to Deer Park Rd.	22900	5.18	B
Deer Park Rd. to Weigh Station (Sutter Rd.)	20744	5.18	B
Weigh Station to O'Brien Rd.	20700	5.18	B
SR 117(Tumwater Truck Route)			
Two-lane Highway			
US 101/SR 117 I/C to Lauridsen Blvd.	3560	23	D
Lauridsen Blvd. to Marine Dr.	6800	23	D

Table 2.15 describes the existing levels of service at signalized intersections. LOS at signalized intersections is based on the average stopped delay per vehicle within the intersection.

Table 2.15
Existing LOS for Highway Segments

Signalized Intersections	LOS	Stopped Delay per Vehicle
US 101		
Lauridsen Blvd.	B	5.1 to 15.0 seconds
E.8th Street	**F**	60.0 seconds or more
E. 5th Street	B	5.1 to 15.0 seconds
E. 1st Street	B	5.1 to 15.0 seconds
Front Street	D	25.1 to 40.0 seconds
Peabody Street	B	5.1 to 15.0 seconds
First & Race Street	D	25.1 to 40.0 seconds
Front & Race Street	B	5.1 to 15.0 seconds
First & Ennis Street	B	5.1 to 15.0 seconds
Front & Ennis Street	B	5.1 to 15.0 seconds
Golf Course Road	B	5.1 to 15.0 seconds
Del Guzzi Drive	A	5 seconds or less

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Figure 2-4

Future Conditions on Existing Route

A 20-year planning horizon is normally used for analysis during state route plans and studies. Since this study fell within the closing of the millennium, the year 2020 was selected as the future-planning horizon for the study. Projected traffic volumes and future LOS were computed based on the output of the City of Port Angeles travel forecast model. The model used was the TMODEL 2, which provides travel forecasts based on future land use patterns contained in the Port Angeles Comprehensive Plan (Table 2.17).

Due to the abrupt end to the study as well as not having developed proposed alternatives, detailed traffic forecasting was not performed to determine alternative impacts on the corridor. Instead, projected future traffic forecasting was used to predict the general future conditions for the existing highway alignments. The forecast was performed without geometric or capacity improvements to the existing route to determine the route's future conditions.

Population/Land Use

Population

The Office of Financial Management (OFM) projects that Clallam County's population will steadily increase over the next 20 years. Based on OFM projections Clallam County's population by 2020 is anticipated to increase by 14,579 or 22 percent. Growth projections by Clallam County have been developed using linear projection methods. The county has traditionally used this method because OFM long-range population estimates have been historically underestimated. During the last eight years (1990-1998) the county has experienced a 2.46 percent growth rate. Based on this growth the county projects a higher increase in population over the next 20 years. A comparison of these growth trends is shown in Table 2.16. Both growth projections identify continued growth in the county.

Table 2.16
Population Growth Projections

	1990	1995	2000	2005	2010	2015	2020
OFM	56,204	63,597	67,898	72,559	75,502	78,292	82,477
Clallam County			71,666	80,925	91,381	103,188	116,519

Based on the city's comprehensive plan growth rate of 1.4 percent, the City of Port Angeles' population is projected to increase from 17,710 in 1990 to 22,081 and 25,375 for 2010 and 2020 respectively. Accompanying any population growth, increased traffic congestion and degradation of roadway level of service can be anticipated. Population along with employment growth also generates residential and commercial development increasing the need for access to these areas.

Land Use

Clallam County anticipates that what manufacturing growth does occur in the county will be centered in the Port Angeles area because the infrastructure is already in place to support this type of development. In Sequim there will be growth in the trade and service industries with no manufacturing growth. The county also expects to see the continuation of a trend along US 101 between Sequim and Port Angeles for the commercial use of non-commercial zoned land by home businesses and home occupation through conditional use permits. It is anticipated that this creeping commercialization will impact traffic in this area.

Continued growth is expected in the Deer Park area, and between Deer Park and the eastern city limits (Port Angeles UGA). It is anticipated that the city at some point in the future will annex this area, subject to acceptance by the area residents. There will be continued residential growth both north and south of US 101 east of Port Angeles.

The forecasted growth for the City of Port Angeles is expected to be the same as the last eight years. Most of the residential development will be in filling vacant lots with single family residences and remodeling of existing structures. Most of the residential development will occur on the east side of town where the city and the county have been working together to require developers to install "city standard" services. Most of the residential development in this area is on the hillsides. Multi-family property on Golf Course Road is still available. Development on the west side will be much slower because services there are not available. Land values will have to increase to make development in this area feasible, because developers are required to install "city standard" services as they develop the property.

Commercial development will remain slow until the city obtains new vacant land through annexation. There are a few 10 to 15 acre commercial developments on the east and west ends of the city, but most of the activity in this sector is redevelopment of existing structures for new uses. This type of activity is occurring all up and down the US 101 Corridor.

Traffic Forecast

The projected traffic increases (from 1999 to 2020) along US 101 and SR 117 are shown in Table 2.17 and Figure 2.5. Along the study corridor, ADT volumes are projected to increase by 20 to 40 percent by the year 2020. A 61 percent increase over current traffic volumes is projected in the vicinity of Reddick Road, while O'Brien Road volumes will increase by 47 percent. As shown in the table below, most highway segments of US 101 will be at or below the LOS standards by 2020. The largest increase on SR 117 occurs in the vicinity of the US 101 interchange and Lauridsen Blvd., with a 51 percent traffic increase. The level of service will be further affected by six intersections operating at or below capacity as noted in Table 2.18.

Table 2.17

Projected 2020 LOS for Highway Segments

Section Description	Growth Rate	ADT	LOS
Two-lane Highway			
Reddick Rd. to Airport Rd.	2.2	12910	**F**
Airport Rd to SR 117	2.4	18000	**F**
SR 117 to Lauridsen Blvd.	1.6	16850	**E**
Lauridsen Blvd. to 8th St.	.8	10580	D
8th St. to Beginning of Couplet (First St.)	.8	13940	**F**
Multilane Highway (Port Angeles Couplet)			
Beginning of Eastbound Couplet to Race St.	1.2	14310	**E**
Race St. to Golf Course Rd.	1.4	24190	**F**
Golf Course Rd. to End of Westbound Couplet (Lincoln)	1.4	20805	**E**
Multilane Highway			
Golf Course Rd. to Brooks Rd.	1.4	42910	**F**
Brooks Rd. to Masters Rd.	1.7	35110	D
Masters Rd. to Deer Park Rd.	1.7	41080	D
Deer Park Rd. to Weigh Station (Sutter Rd.)	1.7	38820	D
Weigh Station to O'Brien Rd.	1.7	38820	D
Two-lane Highway (SR 117 - Tumwater Truck Route)			
US 101/SR 117 I/C to Lauridsen Blvd.	3.3	7270	**E**
Lauridsen Blvd. to Marine Dr.	1.5	9440	D

Table 2.18
Projected 2020 LOS for Intersections

Signalized Intersections	LOS	Stopped Delay per Vehicle
US 101		
Lauridsen Blvd.	B	5.1 to 15.0 seconds
E. 8th Street	**F**	60.0 seconds or more
E. 5th Street	C	15.1 to 25.0 seconds
E. 1st Street	B	5.1 to 15.0 seconds
Front Street	**F**	60.0 seconds or more
Peabody Street	D	25.1 to 40.0 seconds
First & Race Street	**F**	60.0 seconds or more
Front & Race Street	B	5.1 to 15.0 seconds
First & Ennis Street	**F**	60.0 seconds or more
Front & Ennis Street	E	40.1 to 60.0 seconds
Golf Course Road	**F**	60.0 seconds or more
Del Guzzi Drive	D	25.1 to 40.0 seconds

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Figure 2.5

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Chapter 3 EVALUATION CRITERIA

Goals and Objectives

In the course of conducting Study Committee and public meetings a number of issues were raised. These issues and the purpose and need statement were refined into goals for the study and formed the basis for identifying screening criteria and development of alternative strategies.

The goals of this study are to identify effective multimodal strategies that:

- relieve existing traffic congestion;
- maintain the highway level of service standards as defined in the City and Port Angeles Regional Comprehensive Plans to accommodate future travel demands;
- improve safety of all modes;
- enhance freight mobility options;
- improve the reliability of access between the community and the region; and
- conserve the natural beauty and the neighborhood characteristics of the corridor.

Criteria/Measures of Effectiveness

Criteria are the means of screening, evaluating, and measuring proposed solutions (alternatives) to determine their ability to meet the stated goals. Based on the study goals, criteria or measures of effectiveness (MOE's) were developed to evaluate and compare each proposed alternative. The following criteria were reviewed and accepted by the members of the Study Committee:

Mobility:

1. Total Travel Time
2. Local Travel Time
3. Level of Service (LOS)

Study Committee members provided comments on possible means to measure each alternative to handle congestion. These suggestions have been categorized as mobility. Mobility is expressed as the ease of movement of persons and freight through the study area. It is related to levels of vehicular congestion and is responsive to changes in travel demand and/or capacity.

Travel time shows in general terms for each alternative the potential savings and/or delay

reductions for vehicular traffic. *Total travel time* considers the impact of through traffic on the corridor. *Local travel time* takes into consideration local travel time along the corridor and waiting time at intersections.

Level of Service (LOS) is a means of estimating the quality and performance of transportation facility operations in a community. The Transportation Research Board's *Highway Capacity Manual (HCM)* LOS methodology would be used to analyze the level of service for each alternative.

Connectivity:

1. Regional Connection
2. Linkage (multimodal)

Connectivity or continuity is based on committee comments as to measuring the ability of the transportation system to provide direct and dependable linkages to various centers. The purpose of this category of measure is to address the reliability of each alternative to connect the community and the region along the route for all users while providing convenient local use, commuter, and freight linkages.

Regional connection will evaluate the ability of an alternative to connect the community with the geographic region and provide reliable access to support local and regional demands. *Linkage* will enable alternatives to be evaluated for the ease of reaching desired locations and multimodal access for both freight and non-freight traffic to centers within the region, including industrial and commercial areas. Improvement will be determined for each alternative using standard transportation modeling practices.

Safety:

1. Number and severity of potential motorized traffic accidents
2. Number and severity of potential non-motorized traffic accidents
3. Emergency Services Access

The committee expressed its opinion that providing a safe corridor for people to live along and to travel on was a prime concern. *Safety* measures the safety performance for a given alternative to indicate increase or decrease in safety associated with each alternative. The accident rate and associated societal costs would be determined for each alternative using standard safety forecasting practices.

It is critical that efficient emergency routes for police, fire, and ambulance services be preserved and improved by any corridor project. The impact is a qualitative (subjective) measure and is a function of the alternative's effects on traffic circulation, roadway linkages, and congestion relief.

Economic Feasibility:

1. Benefits/Costs
2. Ability to Implement

Economic feasibility measures the benefit derived from each alternative with the estimated cost of the alternative. The cost-effectiveness of the alternative indicates the cost-benefits over the alternative's life cycle. The length of time generally used in planning and forecasting is 20 years. Costs that will be considered in benefit/cost ratio calculations include but are not limited to project costs, annual operating costs and maintenance costs (snow removal, etc.) of each alternative. Benefits are generally considered to include mobility, safety, and user operating costs.

No matter which alternative is selected, funding will be a challenge. The qualitative (subjective) measure, *ability to implement*, will determine the funding potential and the ability to phase the implementation of a given alternative.

Environmental Impacts:

1. Natural Environment
2. Historical Site Impacts

The environmental factors 'brainstormed' by the committee are typical environmental issues and concerns that must be in compliance with National Environmental Protection Act (NEPA)/ State Environmental Protection Act (SEPA) guidelines. Therefore, it was proposed to use NEPA/SEPA suggested methods to conduct a preliminary screening of the alternatives.

Natural Environment is a quantitative measure of environmental impacts of given alternatives that will include impacts to sensitive areas such as wetlands, streams, woodlands, and endangered species. *Woodland impacts* will be determined by the amount of acreage that is affected by an alternative. The degree of an alternative's impact on a *stream* is determined by length of stream crossing and the acreage within the buffer limits that is affected, and potential impacts on fishery resources. Similarly, the *wetland impact* of a given alternative is also determined by the amount of acreage of a wetland and its buffer that are affected. This measure would identify *endangered species* that could be impacted by proposed alternatives.

In response to concerns of impacts to the region's historic character, the *Historical Site Impacts* measure would determine the number of historic and archaeological resources that are within the vicinity and affected by a given alternative.

Social Impacts:

1. Impact on neighborhood
2. Impact on land use character
3. Aesthetic impacts
4. Equity

Social impact criteria indicate potential disruption of the *quality of life and established ambiance of the region*. Disruptions and changes in community character may be beneficial or adverse. Beneficial changes could include reduced congestion, improved mobility, and increased safety. Adverse changes could be disruptions in neighborhood or community cohesion, physical separation of residents from community facilities, decreased mobility and safety, and increased noise and light pollution.

Impact on neighborhood. This measure will take into consideration elements that will address committee comments on negative impact to neighborhoods, community cohesion, rural and urban character, and agricultural lands. This is a *subjective* measure that is based on the results of analysis of residence displacements, noise impacts and community cohesion. *Displacement* will estimate the number of residences that would be displaced by an alternative. N*oise impacts* assess the alternative's potential noise impact and associated risk in terms of implementing an alternative. C*ommunity cohesion* will subjectively consider the impacts of changes in access and travel patterns on a neighborhood caused by possible cutting off streets, restricting access to facilities and adjoining residential/commercial areas.

Land use impact. This measure will first determine if an alternative is consistent with local and regional plans. *Consistency* means that the alternative meets or is supported by specific policy statements, goals, standards, or objectives contained within regional and local land use or transportation plans. Second, this will qualitatively (subjectively) measure the impact on rural character by considering *open space* and *trail* impacts. Agricultural land is defined as land primarily devoted to long-term commercial production of agricultural products. The Port Angeles area contains no land which qualifies as agricultural resource land of long-term commercial significance. The land, however, is considered and plays a greater role as *open space* for the enjoyment of the public. Furthermore, "rural character" in the Port Angeles Planning Region is defined as "...a scenic patchwork of open fields and wood lots interspersed with rural homesteads...". Impacts on *open spaces* and *trails* of a given alternative would be measured by determining the amount of open spaces and trails that are affected.

Aesthetic impacts are based on committee concerns on possible aesthetic, visual, light, and view impacts by alternatives. This measure will evaluate to what degree, if any, the region's aesthetic or visual environment will change by the implementation of a given alternative. This subjective measure will consider Federal Highway Administration guidelines in determining visual quality aspects of each alternative as to the appearance of the landscape and the integrity of visual order.

Equity refers to the extent to which an alternative provides fair distribution of benefits' costs among the various geographic and social-economic population groups. This is a subjective measure that is based on the results of social, economic, and environmental analysis.

Business Impacts:

1. Business vitality
2. Freight mobility

The committee felt that any improvement alternative must take into consideration the economic conditions of the community. *Business vitality* will determine the economic impact of each proposed improvement by considering actual displacement of businesses, the alternative's proximity to existing businesses and its removal or alteration of access.

Public Acceptance:

This criterion measures relative support for each alternative by the public and ensures that the interests of businesses, neighborhoods and communities are considered. The public involvement process, which includes open houses and questionnaires, is applicable to this measure.

Alternative Evaluation

The intended procedure to evaluate proposed study alternatives was:

- Review the proposed alternatives;
- Carefully study the criteria definitions;
- Determine the relative importance of each criterion;
- Review the impact forecasts for each alternative;
- Rate each alternative against each criterion using an evaluation matrix.

In order to determine the relative importance of each criterion a survey was mailed to each committee member with a request to evaluate the importance of each screening criterion as well as each individual measure. Each member was requested to first evaluate the importance of each screening criteria category on a scale of 1 to 5, with 1 being the least important and 5 signifying extreme importance. Next, they were asked to evaluate the importance of each individual measure, in the second table, on a scale of 1 to 5, again with 1 being the least important and 5 signifying extreme importance. The items

were not to be ranked in priority, each item was to be rated individually, for example more than one item can be rated a 5.

The results of the survey would have been taken into account during the rating of each alternative. *Freight Mobility* as a criterion was added by the Study Committee after the survey was completed; therefore, no rating was available. The results of the survey are presented in the following two tables:

Table 3.1
Screening Criteria - Survey Results

Criteria	Average	Median	Mode
Mobility	**3.8**	**4**	**4**
Connectivity	**3.5**	**4**	**4**
Safety	**4.3**	**5**	**5**
Economic Feasibility	**3.8**	**4**	**4**
Environmental Impacts	**3.3**	**3**	**2**
Social Impacts	**3.7**	**4**	**5**
Business Impacts	**3.9**	**4**	**5**
Public Acceptance	**3.7**	**4**	**4**

Average is the arithmetic mean of the responses received.
Median is the number that constitutes the middle value in the distribution of responses; above and below lie an equal number of values.
Mode is the most frequently occurring value of the responses given.

Table 3.2
Screening Measures - Survey Results

Screening Measures	Average	Median	Mode
Mobility			
Total Travel Time	**3.6**	**4**	**4**
Local Travel time	**3.3**	**3**	**3**
Level of Service (LOS)	**3.6**	**4**	**4**
Connectivity			
Regional Connection	**3.5**	**3.5**	**4**
Linkage (Multimodal)	**3.5**	**4**	**4**
Safety			
Number and severity of potential motorized traffic accidents	**3.9**	**4**	**4**
Number and severity of potential non-motorized traffic accidents	**3.8**	**5**	**5**
Emergency Services Access	**4.1**	**5**	**5**
Economic Feasibility			
Benefits/costs	**3.7**	**4**	**4**
Ability to Implement	**4**	**4**	**5**
Environmental Impacts			
Natural environment	**3.4**	**3.5**	**3**
Historical site impacts	**3.2**	**3**	**3**
Social Impacts			
Impact on neighborhood	**4**	**4**	**5**
Impact on land use character	**3.7**	**3.5**	**5**
Aesthetic impacts	**3.4**	**3**	**5**
Equity	**3.5**	**3.5**	**5**
Business Impacts			
Business Vitality	**4**	**4**	**5**
Freight Mobility			
Public Acceptance			
Public Acceptance	**3.7**	**4**	**4**

Chapter 4 Alternative Strategies Development

Alternative development was carried out in an approach that insured public input and comment, as well as ideas from a broad spectrum of people. Appendix C has a description of the public involvement process. Under the original funding scenario, upon review of the public's suggested solutions, the committee would develop alternatives for evaluation from the public's suggested improvement strategies.

Alternative Strategies

On October 7, 1999, the second of two public meeting was held to solicit the public's input of ideas on how to improve the study route and solve the problems and issues expressed earlier in the process. To insure open communication between the Study Committee and the public, the committee participated in this public forum. To further insure that everyone had an equal chance to be heard, the participants were divided into small working groups and conducted individual brainstorming sessions.

Working within the project goals, each group identified potential solutions and improvement ideas. These suggestions, along with the public's vision of how the corridor should look, as identified during earlier public meetings, were consolidated and categorized into potential strategies by the project team. These preliminary alternative strategies were consolidated into the following categories.

Existing Transportation System Strategies

This category considers increasing traffic capacity and mobility by improving the existing US 101 and SR 117 corridors. It includes a variety of transportation system management (TSM) and transportation demand management (TDM) options. TSM strategies look at measures that could be taken short of major construction. TSM strategies are for short to medium term time frame measures and could include operational improvements (signalization, access management, channelization, etc.). TDM contains a broad range of options intended to reduce and reshape the demand of the transportation system. Such strategies are often relatively low in cost. Their success depends both upon the active cooperation of the private sector and upon effective decision making by individuals who use the transportation system.

This category also includes "build" options that would improve the existing highway infrastructure; i.e., interchanges, pedestrian overpasses, straightening curves, widening, or at-grade-crossings enhancements. These options would attempt to reduce alignment difficulties without the use of a new route. Build strategies are medium to long-term measures.

Alternative Transportation Strategies
This category considers multimodal strategies to increase the efficiency of the existing transportation system. Strategies include, but are not limited to, transit, non-motorized transportation, and suggested ferry service improvements.

Land Use
This category identifies alternative strategies that would affect land usage and its management. These strategies could indirectly impact the mobility of the corridor.

New Roads and Connections Options
This category presents various build proposals, which would result in new alignments or road. All the suggested solutions would result in major construction projects.

On November 18, 1999, the Study Committee met with the Project Team to review and discuss the preliminary alternative strategies developed to this point. The original intent of this meeting was to begin developing detailed alternatives to be screened for feasibility and to judge their ability to achieve the project's desired goals and objectives.

However, with the passage of I-695, funding for completion of the study was eliminated. Therefore the meeting's focus changed from detailed alternative development to review and consolidation of alternative strategies to ensure accurate documentation of all ideas and options collected to date. The Project Team felt that this would be a logical place to tie off the study and establish a good starting point for future reactivation.

The following are the various alternative strategies identified during the public involvement process. The listed alternative suggestions have been consolidated into categories to combine like issues. The maps located at the end of this section are graphic interpretations of the ideas and suggested solutions provided by the public as they were categorized by the Study Committee.

Existing Transportation System Strategies

Traffic Operations
- Make traffic on Laurel and Lincoln Streets one way.
- Consider one-way traffic patterns.

- Improve current corridor, widen roadway (wider is better).
- Divert ferry traffic (off loading) to go west to truck route (SR 117).
- Left and right turn lanes along couplet at crossing intersections.
- Make Morris Creek curves safer: Install median barricade.
- Extend guardrails at SR 117 and US 101.
- Southbound SR 117 needs a passing lane.
- Improve existing Fifth Street. (Remove on-street parking, traffic signals, etc.)
- Park Street between Race & Liberty Street needs widening and sidewalks.
- Improve existing road rather than an alternate alignment.
- Improve existing highway without changing alignments.

Traffic Signals

- Traffic signal improvements/synchronization of all citywide signals.
- Synchronization of traffic signals at Front/First and Ennis Street.
- Traffic light at Fairmont Ave.
- Traffic light at Laurel and US 101 (high school traffic).
- At Fourth and Lincoln reduce conflicts by removing one of the three pedestrian crosswalks, preferably the crosswalk on the north side of Fourth and Lincoln intersection.
- Left turn only signal (left arrow) on Lincoln at 5th Street intersection. Both north and southbound.
- Consider eliminating light at Ennis - check operational use, change to loop direction (light timing).
- Install pedestrian-activated crosswalk lights.
- Timing of traffic signal at Monroe Street.
- Timing of traffic signal at Del Guzzi Road. Left turns from Del Guzzi should be on demand only.

Parking

- Eliminate on-street parking on Front and First Street with center through lane and left/right turn lanes.
- Allow on-street parking on one side of highway only and provide sidewalks.
- Remove all on-street parking on US 101 (Lincoln, Front & First Streets).
- Support parking downtown.
- Develop alternative downtown parking (eliminate on-street parking - develop off-street parking).

Signage

- State "services available" signs only.
- Adequate signing for destinations. Per discipline (freight, tourism, etc.).
- Minimize signs and size.
- No grandfathering of signs.
- Signage at ferry to route westbound traffic to SR 117 to reduce congestion.

Golf Course Road to Del Guzzi Road Improvement Options

- Traffic light at Del Guzzi on timer not demand signal.
- US 101 flowing toward Del Guzzi, US 101 has priority - light remains green for US 101 at night (late at night).
- Problems between Golf Course Road and Del Guzzi - no left turns between these streets - remove center turn left lane.
- Improve intersection at Golf Course Road and US 101 for pedestrians, bicycles, and motor vehicles.
- Take traffic light out at Del Guzzi Road and US 101 and make traffic enter US 101 at Golf Course Road.
- Straighten highway at Golf Course and US 101 - parking lot to Shucks.
- Traffic operational issues at Golf Course and US 101.
- Improve the area between in the vicinity of the Safeway mall area (Golf Course Road and East Baker Street) by eliminating the turning movement conflicts. Could include making departing movements from commercial areas right turns only. Improve the left turn lane.
- Close off Del Guzzi Road access to US 101 and connect with Golf Course Road instead by frontage road.

Lincoln and Lauridsen Intersection Improvement Options

- Realign intersection at Lincoln and Lauridsen Blvd. by straightening out existing roadway curve, remove island, and fix geometrics.
- Straighten out Lincoln and Lauridsen Intersection.
- Redesign Lauridsen Blvd. and Lincoln intersection.
- Locate pedestrian overpass at Laurel and Lauridsen Blvd. (include this in with the fix to straighten Lincoln and Lauridsen Blvd. intersection).

Deer Park & O'Brien Road Intersections Improvement Options

- Improvements to Deer Park and US 101.
- Deer Park and O'Brien at-grade crossing conflicts.
- Build an interchange at O'Brien Road.
- Traffic light at O'Brien Road.

- Merge lanes at Deer Park and O'Brien Roads (OK now, but needed for use of merge lanes).
- O'Brien needs further study! 15 minute wait on side street to enter or cross.

SR 117/US 101 Interchange Improvement Options

- Improve access to SR 117 for traffic coming from east (SR 117 & US 101 interchange).
- Need eastbound turn from SR 117 onto US 101.
- Improve SR 117 & US 101 interchange by allowing access from east side; provide for eastbound ramp (Could have dramatic impact, short-range fix).
- Would work best if Lauridsen Blvd. across White Creek to Golf Course Road and improvements to intersection at Lincoln and Lauridsen Blvd. were also implemented.
- Improvement to SR 117/US 101 interchange could have dramatic impact - short-range fix. Also need eastbound on ramp.
- Improve the SR 117/US 101 interchange.
- SR 117 needs to go east as well as west at US 101.

SR 117/Marine Drive Intersection Improvement Options

- Improve the SR 117 and Marine Drive intersection.
- Need to separate industrial and recreation traffic.
- Improve walking trail in area (Linked to Olympic Discovery Trail).

Access Control

- Limited access to US 101 (reduce the number of access connections with highway, especially new developments - consider frontage roads or single access points).
- Build frontage road, especially between Deer Park and O'Brien Road.
- Limited access with frontage road is a good idea on the east end of town from Monroe to Larch, on both north and south sides of US 101. Connect frontage roads to US 101 with traffic signal when warranted by future traffic.
- Dead end Jones Street and eliminate access to Highway 101. (measure to prevent high school students crossing at this point).
- Provide better access to existing scenic pullouts. Develop new sites.
- Tie Gateway project to multimodal transportation forms.
- Try to discourage direct access roads to "strip malls" which seem to be developing along US 101 east of town.
- Install median barrier at Morse Creek 'dip'.

Route/Scenic Beautification

- No commercial signs - traffic and directional signs only.
- No billboards.
- Reduce tree cutting.
- Plant live barriers - visual buffers.
- Minimize noise with noise walls.
- Landscaping - natural vegetation.
- Beautification (landscaping) includes possible citywide theme/pattern.
- Underground utilities.
- Clean up trashy areas.

Maintenance

- Eliminate studded tires.
- Ruts at Walmart - improve preservation program.

Alternative Transportation Strategies

Ferries

- Establish ferry service - Port Angeles to Seattle.
- Move ferry terminal from downtown.
- Move ferry terminal to old Rayonier mill location.
- Develop barge facility.

Transit

- Build more Park & Ride lots
- Park & Ride facilities.
- Park & Ride lot at O'Brien Road and/or Deer Park.
- Expand transit options.
- Improve access to airport - especially transit moving people to and from downtown area.
- Light rail in addition to highway (shoulder).
- Provide better access at terminal parking/holding area.
- Increase transit stops.

Non-motorized improvement options

- Improve Olympic Discovery Trail (old railroad grade).
- Help develop Olympic Discovery Trail (non-motorized - old railroad track).
- Support Discovery Trail to alleviate problems with bikes in town.
- Striping and space available for bicycles (bicycle lanes).
- Install bike lanes and signage along SR 117.
- Bicycle/pedestrian/back pack storage/check facility in downtown area and outside.
- Combination bicycle/transit/storage facilities (lockers).
- Remove parking along First and Front Streets and put in bike lanes (right side of road). Extend bike lanes to SR 117.

Pedestrian improvement options

- Build pedestrian underpass at Morris Creek Bridge (US 101).
- Extend sidewalks to Masters Road (Walmart/K-Mart mall area).
- Crosswalks on couplet are very dangerous. Strategically locate pedestrian overpasses at Aggies (Front & Albert Street) and the Chevron station (First and Albert Street).
- Fourth and Lincoln major pedestrian use and no traffic light. ADA access very important for this location.
- At Fourth and Lincoln reduce conflicts by removing one of the three pedestrian crosswalks, preferably the crosswalk on the north side of Fourth and Lincoln.

- Lincoln and First Street is a high pedestrian accident location - build sky bridge/pedestrian overpass.
- Pedestrian overpass at Lincoln & Lauridsen intersection or/and at Lincoln & Laurel.
- Pedestrian underpass at Lincoln & Lauridsen intersection or/and at Lincoln & Laurel (would need to resolve storm water issue).
- Close street between Lincoln & Laurel to protect pedestrians (location is in the vicinity of the Albertsons near Lincoln & Lauridsen).
- Build pedestrian overpass or install pedestrian activated warning light at O'Brien Road.
- Pedestrian overpass at Deer Park.
- Improve pedestrian access in Golf Course - Del Guzzi Road area.
- Consider a pedestrian overpass for Del Guzzi Road because pedestrians won't wait for pedestrian-actuated signals, which takes time.
- Long-term solution - look at pedestrian undercrossing for ADA and reduce pedestrian, overhead conflicts, and industrial loads.
- Install pedestrian-actuated buttons to reduce the wait for pedestrian signal, especially at Monroe Road.

Land Use

- Discourage strip development.
- (Build) Freight distribution center outside of town (each side of town) - allow only smaller delivery vehicles in downtown core/throughout city.

New Roads And Connections Options

New Roads

- Direct route (US 101) to Olympic National Park (Hurricane Ridge) with interchanges and proceeds west side of Port Angeles.
- Bypass route.
- Tunnel under Port Angeles - Morris Creek to west side of Port Angeles.
- Detour truck traffic around town.
- Complete bypass extending from Deer Park to Bean Road.
- Partial bypass from Mt. Pleasant Road to Bean Road.
- Preserve right-of-way corridor for US 101 with limited access. Build bypass to the south of town with limited access (no driveways, entrances, etc.).
- Need to address issue of access by doing something about it now.
- Develop a truck route/bypass.

New Connections

- Need alternate route for local traffic use, not for tourist.
- Provide alternate route separating through traffic from local traffic.
- Alternate route over White Creek by extending at Third, Fourth, and Fifth Street. If just one route, Fifth Street preferred.
- Golf Course Road alternative to Race Street.
- Develop alternate route across Morris Creek extending across White Creek to Lauridsen Blvd.
- Extend Lauridsen across White Creek to Golf Course Road.
- Extend alternate highway across White Creek from Golf Course road to Deer Park along power line right-of-way. Consider this route as a state route (US 101) and return current roadway to the city.
- Develop alternative route, east of Morris Creek to Lauridsen Blvd.
- Connect Lauridsen Blvd. across White Creek to Golf Course Road.
- Local access route from Mt. Pleasant Road to Race Road following Bonneville power line right-of-way.
- Develop an alignment using the city's right-of-way for Milwaukee Road from 4th Street to the Lower Elwha Road.

West End Connection Options

- Bridge Valley Creek with Lauridsen Blvd. (vicinity of SR 117) and extend to US 101. (west side of town).
- Provide a truck route to provide better western access to Daishowa Mill/port facility.
- Improve access to airport - for freight.

Race-Lauridsen Options

- Use Lauridsen Blvd. as bypass route.

- Implement truck route Front/First Street to Race Street to Lauridsen Blvd. to SR 117 (improve SR117 & US 101 interchange to allow for traffic from east). Will require improvements to Race Street and Lauridsen Blvd. intersection, Lincoln and Lauridsen Blvd., and at Front/First Street.
- Develop alternate route for truck traffic - Lincoln Street to Lauridsen Blvd. to Race Street. Make improvements to Front & Race as well as First & Race.
- Through truck traffic use Lauridsen Blvd. and Race. Modify corner of Les Schwab (East Front and E Street) - truck-turning radius. Flatten curves at Race & First/Front Streets.
- Alternate route through town - access Race Street and fix Race Street and Lauridsen Blvd. bridge to make turns work.
- US 101 to Race Street to Lauridsen Blvd. to US 101- alternate route secondary road "enhance Race Street - highway corridor facility".
- Use Race Street to Lauridsen.
- Improve Lauridsen Blvd. and Race Street bridge to accommodate truck traffic.
- Improve Peabody Creek bridge at Race Street.

<u>Improve Morse Creek Alignment Options</u>

- Need another way across Morse Creek.
- Straighten out the alignment over Morris Creek.
- Eliminate the jogs in highway (Morris Creek). Use Bonneville Power lines alignment as alternative.
- Make Morris Creek curves safer.
- New alignment across Morris Creek - straighten roadway.
- Bridge Morris Creek (change alignment).
- Need additional crossing over Morris Creek.
- Lower speed limit in Morris Creek canyon.
- Another crossing at Morris Creek.
- Improve Morris Creek crossing by developing alternate route across Morris Creek.
- Build database of emergency alternative transportation modes and providers (in case Morse Creek access point fails or is disrupted).

Committee Interim Recommendations

During the final committee meeting the Study Committee recommended that the team identify operational improvements that could be implemented in the short run at a low cost. The committee members felt there was a need to implement some immediate measures to show the public that time was not wasted on the project.

The following operational improvements are low cost strategies that the Study Committee asked WSDOT and local jurisdictions to consider implementing in the near future. Other improvements identified during the study process are not considered near term or low cost, or would require further study, and are not recommended for implementation at this time.

- Traffic light at Del Guzzi Road -- left turns from Del Guzzi should trip light on demand.
- Ennis Street light needs to be reset because Rayonier Mill has shut down.
- Monroe Road traffic signal timing needs to be reset to allow more green time for side street. (Could be a school crossing issue.)
- Left turn only signal (left arrow) on Lincoln at 5th Street intersection, both north and southbound.
- Consider barricade (Jersey barrier) at Morse Creek 'dip'.
- Consider installing pedestrian-actuated buttons to reduce the wait for pedestrian signal, especially at Monroe Road.
- Speed limit at Black Diamond Bridge (45 mph) -- relocate sign 200 yards to west to reduce confusion and speeding.
- Consider Lincoln and couplet parking. Remove on-street parking to increase capacity. (Though it could be considered a low cost improvement, it does not fit the category as a near term improvement in that it would require further study before implementing.)
- Golf Course to Del Guzzi Road left/right turn traffic conflicts -- consider right turn only out of commercial areas, limited access left turn lane. (Submitted to Olympic Region Headquarters Traffic Section on 11/1/99)
- Consider installing cross walks at Albert and Front/First (couplet) and Peabody at Front.
- At Fourth and Lincoln reduce conflicts by removing one of the three pedestrian crosswalks, preferably the crosswalk on the north side of Fourth and Lincoln intersection.
- Extend guardrails at SR 117 and US 101.
- Fix ruts in pavement vicinity of Walmart.

Final Comments

As the region continues to grow, US 101 will become increasingly important for the community as a primary traffic corridor and as a gateway for the peninsula. It is important to plan for and accommodate growth in the future. The intent of this study was to identify and assess the needs of the US 101 Port Angeles corridor and to determine an ideal approach to enhance regional mobility and improve traffic circulation and safety within and around the Port Angeles region.

Although funding cuts did not permit completion of the study process, the committee was able to accomplish three major milestones. The study has developed a purpose and need, identified the criteria the public, WSDOT and local agencies feel need to be addressed when evaluating alternatives, and developed alternative strategies and options to address local concerns and issues. The completed work in this study represents the efforts of many discussions by Study Committee members, local and regional agencies, and the citizenry who took an active role in the transportation planning process.

Throughout the process it has been demonstrated that there is interest in addressing the needs and concerns of the US 101/SR 117 corridor. There is also interest in arriving at a consensus that could be incorporated into the *State System Plan*.

The next steps for the study would be to develop more detailed alternatives for evaluation and to conduct an evaluation of each alternative to determine a preferred alternative. Any future study should continue the high level of public involvement by all parties, particularly residents and local groups. When the study is reactivated, a critical first step will be the determination of the level of environmental analysis and documentation.

Appendix A STUDY COMMITTEE

The following stakeholders were invited to participate as members of the Study Committee. Some members were unable to actively participate in committee meetings, but voiced interest in the study and requested to be kept informed on the project's status. Active participation corresponded with stakeholders' stated level of desired involvement and potential project impacts to their specific areas of interest.

Bruce Becker	*Resident*
Carol Boardman	*Clallam County Commission*
Fred & Jan Bock	*Resident*
Jeff Bohman	*Peninsula Trails Coalition*
Carol Brown	*Lower Elwha Tribal Council*
James Bunger	*Puget Sound Transfer & Storage*
Fran Burch	*Port Angeles Association of Realtors*
Don Clotfelter	*WSDOT Port Angeles Maintenance*
Renee Cochran	*Resident*
Dan DiGulio	*Clallam Transit System*
Joseph Donisi	*Clallam County Road Department*
Doris Doyle	*Cresthaven Homeowners Association*
Jerry Eldred	*School District No. 121*
Jim Ervin	*Kply*
Paul Eyestone	*Resident*
Jack Galloway	*Olympic National Park*
Gary Gleason	*Olympic Peninsula Bicyclists*
Charles Grant	*Resident*
Marny Hannan	*Clallam County Economic Development Council*
Erl Hansen	*Port Angeles Chamber of Commerce*
Rick Hert	*North Olympic Visitor & Convention Bureau*
Arla Holzchuh	*Port Angeles Downtown Association*
Martha Ireland	*Clallam County Commission*
Rich James	*Clallam County Community Development*
Jennifer Kem	*Resident*
Gary Kenworthy	*City of Port Angeles*
Jane Kirschner	*Daishowa America Co. Ltd.*
Richard & Lynne Kott	*Resident*
Jim Leonard	*Federal Highway Administration*
Bob Loshonkohl	*WSDOT Port Angeles Maintenance*
Terry Manning	*Resident*
Andy Meyer	*Clallam County Community Development*
Bruce Monroe	*Olympic Peninsula Bicyclists Club*
Jerry Moore	*WSDOT Port Angeles PEO*
Wayne Ostlund	*Protect Peninsula Future*
Mary Lou Paulson	*Resident*
Lorraine Ross	*Resident*
Wayne Rush	*Peninsula College*
Bill Ryan	*US EPA Region 10*
David Sawyer	*City of Port Angeles*
Darelene Schanfield	*Olympic Environmental Council*
Ron Schromen-Wawrin	*Resident*
Tim Smith	*City of Port Angeles*
John Swartz	*Washington Log Truckers Conference*
Ken Sweeney	*Port of Port Angeles*
Craig Weckesser	*Olympic Air Pollution Control Authority*
Everett Winter	*Resident*

PROJECT TEAM

The Project Team consisted of WSDOT staff responsible for coordinating and managing the carrying out of work tasks identified during the study process. Individual staff members from various WSDOT offices were brought into the process as needed or required depending on the issues that arose. These individuals participated as *resources* in their areas of expertise.

George Kovich	*Olympic Region Planning Office*
Vicki Steigner	*Olympic Region Planning Office*
Shuming Yan	*Olympic Region Planning Office*

Appendix B Origin and Destination Survey

Overview

This appendix provides a summary and analysis of information on truck movements gathered through personal interviews of truck drivers participating in an Origin and Destination survey. During public meetings held in Port Angeles the public identified truck traffic within Port Angeles and conflicts between truck and pedestrian traffic as a major concern. In order to determine how much of the truck traffic was destined for Port Angeles and measure truck movement within the study corridor the study Project Team conducted a survey of truck traffic origination and destination within Port Angeles.

A total of 223 drivers were interviewed during this survey; 218 identified their specific final location and route traveled. Generally 91% of the trucks surveyed were destined for the Port Angeles area. More than half of the trucks' destinations were areas located west of the city's central business district (CBD). Approximately 127 trucks used some portion of the city truck route; of these, 76% used that portion which passes through the CBD to traverse Port Angeles. Only 6% of the trucks that used the truck route had destinations in the CBD or along the couplet. The majority of these trucks operate on the route on a daily basis.

Data Collection Process

The truck driver survey collected information on vehicle configuration, cargo type, specifically logging related or not, trucking company location, origin and intended destination, and the specific route traveled through the Port Angeles area. To ensure maximum truck driver participation, the questionnaire was designed to be completed within three minutes. The interviewer by visual survey, for example number of axles and vehicle type, completed several questions. The interviewers asked the truck drivers the remaining survey questions (see Attachment A). Using a map of the Port Angeles area (backside of questionnaire), the route the driver intended to utilize traveling through the study area was highlighted as well as the destination's location, if the vehicle destination was Port Angeles.

Truck drivers were interviewed at one of two locations at either end of the survey area. Driver interviews were conducted at the Washington State Patrol Weigh Station located on the east side of Port Angeles at milepost 254.51 near Sutter Road. Drivers on the west side of Port Angeles were interviewed at the *Grays Harbor Log Scaling and Grading Bureau's* Log Scale, vicinity milepost 243.64. Interviews were conducted during two-hour periods on September 29,1999: once in the morning and again in the afternoon.

Interviews were conducted during peak traffic periods, which were determined to be 8:00-10:00 AM and 3:00-5:00 PM. Peak periods were determined by obtaining truck traffic counts from permanent traffic counter RO69 located in the vicinity of the state patrol weigh station. A Wednesday was chosen for the interviews to obtain an average traffic pattern rather than heavy Monday or Friday traffic movement. Washington State Department of Transportation personnel from the Port Angeles Maintenance Office conducted interviews.

Overall truck driver participation and cooperation was excellent. Two trucks on the east end of Port Angeles refused to stop for the survey. At the west interview point 20 trucks did not stop to be interviewed. These trucks either originated from or arrived at the Crown Pacific mill located directly across from the log scale where survey interviews were being conducted.

Data Analysis

Data collected from the interviews was entered into a database. To assist in the analysis of data as to destination location and route taken, as developed from information highlighted on survey maps, the area was divided into zones. Destinations identified by truck drivers during the interview process were input into the database based on the zone in which the truck destination fell. The definition of each zone is as follows (Figure B-1):

Zone 0 Destination that is not Port Angeles.
Zone 1 Destination located between Deer Park Road and Golf Course Road.
Zone 2 Destination located between Golf Course Road and Cherry Street and north of E 5th Street (includes downtown and couplet).
Zone 3 Destination is Port Area (includes Cherry Street west and north of W 5th Street).
Zone 4 Destination is Airport and/or the Industrial Park Area (includes Cherry Street west and south of W 5th Street to Lauridsen Boulevard and Edgewood Drive).
Zone 5 Destination located west of Cherry Street and south of Lauridsen Boulevard and Edgewood Drive.
Zone 6 Destination located between Golf Course Road and Cherry Street and south of E 5th Street.

Similarly the highway corridor was segmented in order to allow inputting of each route traveled into the database, as well as analyzing truck movement. The definition of each route segment is as follows (Figure B-2):

Segment 1 US 101 east of Golf Course Road
Segment 2 US 101 - Golf Course Road to intersection of Lincoln/Front & First Street (Port Angeles Couplet)
Segment 3 Intersection of Lincoln/Front & First to intersection of SR 117/Marine Drive

Segment 4	SR117
Segment 5	US 101 west of SR117 interchange
Segment 6	US 101 - Lincoln Street from Lauridsen Blvd. to Front/First Street
Segment 7	US 101 east of SR117 interchange to Lauridsen/Lincoln
Segment 8	Lauridsen Blvd.
Segment 9	Marine Drive west of intersection of SR 117/Marine Drive
Segment 10	Race Street
Segment 11	Airport Road

Presentation of Results

Survey results are presented in a set of five tables. Table 1 summarizes survey question answers by survey location and time of day. Information includes total number of truckers interviewed, number of loaded trucks, number of log trucks, truck's home base, truck's origin and destination, and trip frequency. The table also summarizes the responses to question 6 of the questionnaire.

Table 2 presents truck destinations by zones by routes respectively. For each route the trip frequency and truck configuration is presented, and the percentage of trucks destined for each zone. A route is made up of segments as defined in the previous section. For example, route 1-2-3 represents a route traveled from Deer Park Road west along US 101, along the Port Angeles couplet to the intersection of SR 117 and Marine Drive.

Table 3 presents trucker's home base by city, vehicle configuration and the number of log trucks home based. Tables 4 and 5 present information by city of origin and city of destination respectively. The number of trucks by configuration, number of loaded trucks, and number of log trucks are presented.

Survey Results

Most of the truck traffic surveyed, 66.4 %, originated from the eastern end of Port Angeles. The amounts of traffic surveyed during the morning and afternoon hours were about equal. Of the trucks surveyed, 61% were loaded with cargo, and nearly 55% of these were tractors and trailer combination. Another 32% were straight trucks, with truck and trailers, and tractor with two trailers making up the remaining 13%. Logging trucks accounted for approximately one-third of the total surveyed traffic.

Of the surveyed trucks, Port Angeles was home base for 60%. Sequim was the next most common home base for trucks, at 6%. Trucks home based in Clallam County (excluding Port Angeles) accounted for 11%, while 7% were based from out of state.

Of the surveyed traffic, 57 % originated in Clallam County, with 45% being log trucks. (Most were from rural locations and were logging related.) The frequently identified origins for truck traffic were: Sequim, 13%; Port Townsend, 9%; Tacoma, 8%; and Forks

6%. Port Angeles accounted for 23% of trucks originating in Clallam County. Many of these trucks were either home based in Port Angeles and/or conducting deliveries within the local area. One-third of the surveyed trucks originating on the east side of Port Angeles were empty and identified Port Angeles as their destination. Along with the high number of trucks home based in the Port Angeles area, this would indicate that Port Angeles is also a major origin for truck traffic on the Peninsula.

Destinations

Port Angeles is considered a major focal point for truck activity for the North Olympic Peninsula. This is borne out with 91% of the trucks identifying Port Angeles as their destination in the survey; 60% of the trucks were carrying loads. Log trucks made up 89% of the trucks destined for Port Angeles. Trucks passing through Port Angeles to other destinations (Zone 0) accounted for 9% of the surveyed traffic.

Within Port Angeles the distribution of truck destinations varies. The port area of the city (Zone 3) and the stretch of US 101 west of the city (Zone 5) account for nearly 53% of the traffic's destinations. Zone 5 was identified most often as the final destination for truck traffic (29%). A lumber mill, a number of log yards, trucking companies, and a quarry, among others, are located along this portion of US 101 and act as traffic generators. Nearly all the log truck traffic surveyed (89%) terminates in either of these two zones. The bulk of the trucks arriving at these destinations were tractor/truck with trailers combinations: 87% (Zone 3) and 60% (Zone 5).

Zone 1, US 101 east of Golf Course Road, and Zone 2, primarily the couplet and the central business district (CBD), were the next most frequented destinations, 16% and 14% respectively. The type of trucks arriving within these zones was equally divided between straight trucks and tractor plus trailers. Zone 4, the airport industrial area, and Zone 6 accounted for the least amount of trucks. Trucks arriving in Zone 4 and Zone 6 were mostly straight trucks or delivery trucks.

Route Segments

US 101 provides the only means for truck movement in the Port Angeles region. Most trucks traveling to or through Port Angeles use a route that has been historically considered as the city's truck route or some portion of it; 58.3% of the trucks surveyed indicated using this route. The route consists of Lincoln and First/Front Streets (US 101) east along the couplet (central business district) to Marine Drive, Marine Drive to SR 117, and SR 117 to US 101. Marine Drive and that portion of the couplet running through the city's CBD are city streets, while the rest of the route is state highway.

Of the trucks using the truck route, 76.4% use it on a daily basis, while 11% operate on the route on a weekly basis. Nearly 65% of the trucks using this route were tractor/truck and trailer combinations. Truck drivers using the truck route indicated a destination of Port Angeles 85% of the time. Again the main Port Angeles destinations were the port

(Zone 3), 52%, and along US 101 west of Port Angeles (Zone 5), 36%. Through traffic not stopping in Port Angeles (Zone 0) was the next most surveyed user of the truck route (15%). Most of the truck route traffic originated east of Port Angeles (66%), requiring the traffic to travel through the city's CBD. The amount of traffic using this route during the morning and evening peak hours was evenly split (51.2%-PM, 48.8%-AM).

SR 117 was used by 46% of the surveyed trucks to travel to their final destination, be it Port Angeles or another city. All trucks traveling beyond Zone 5 from the west used SR 117. The portion of US 101 from the SR 117 interchange to Lauridsen Blvd. (route segment 7) was never used by eastbound truck traffic, but was used once by a westbound surveyed vehicle. Airport Road (route segment 11) was used by 22 surveyed trucks (10%), all of which were tractor-trailer configured trucks.

All survey route segments that make up US 101 were used by all trucks surveyed with the exception of Lincoln Street and the portion of highway heading west from Lauridsen Blvd. (route segment 6 and 7). Few surveyed trucks used Lincoln Street to travel through Port Angeles. Eight trucks or 4% of the surveyed traffic used US 101 from the couplet to the SR 117 interchange. All the trucks using these segments were making deliveries to locations along the route segments. Race Street (route segment 10) was also little used by surveyed trucks; those that did were straight trucks. Lauridsen Blvd. (route segment 8) was not used at all by any of the truck drivers interviewed during the survey.

Bypass

Interview question number 6 asked if truck drivers plan to make a short stop in Port Angeles for gas, meal, etc. They were also asked if they would still stop if a bypass were built. The question was intended for drivers where Port Angeles was not the destination, capturing the information from trucks passing through Port Angeles.

For this question "Port Angeles" meant the area within the city limits; all the survey zones with the exception of Zones 0,1, and 5. However, drivers answered part or the entire question even if they indicated Port Angeles as their destination. Of those whose destination was not Port Angeles only 67% stated they planned to stop, while 79% stated they would stop if a bypass were built. Considering the total responses to question 6, 77% stated they would stop in Port Angeles if a bypass were built or not.

Comments

The following comments were provided by truck drivers that were interviewed:

- Restrict SR 117 to trucks 10,000 pounds and up only.
- Want bypass.

Conclusions

This Origin and Destination Study indicates that Port Angeles is both a major truck destination and an origin on the Olympic Peninsula. The majority of the trucks traveling along the US 101 corridor terminate their movement in and around Port Angeles. Within Port Angeles itself freight truck traffic is generally destined for the city port area and the area located west of the city along Highway 101. Most of the trucks arriving in these locations are primarily tractor/truck plus trailer combinations.

The US 101 corridor is Clallam County's only major commercial thoroughfare for truck traffic. All the truck traffic passing through Port Angeles utilizes the city truck route which consists of city streets passing through the central business district from the US 101 portion of the Port Angeles couplet and connecting with SR 117. The truck route is the main route used by westbound traffic to access the two main destination hubs for trucks in Port Angeles. Mainly trucks for local deliveries use Lincoln Street, which is the north-south leg of US 101 within Port Angeles.

The survey results would indicate that the majority of the truck traffic is originating east of the City of Port Angeles. However, the closure of US 101 in the Lake Crescent area during the survey period may have impacted eastbound truck traffic enough to cause lower than normal truck movement. In addition truck traffic originating in the west is usually dependent on logging operations.

Attachment A

TABLE 3. Truck Home Base

Home Base	Truck Configuration							
	Straight Truck	Tractor	Tractor & Trailer	Tractor with 2 Trailers	Truck & Trailer	Total	Percent	Log Trucks
Port Angeles	46	2	62	15	6	**131**	**60**	**44**
Clallam County						**24**	**11**	**13**
Beaver			2			2		2
Carlsborg					1	1		
Forks	1	1	5		1	8		6
Joyce			1			1		
Sequim	8		3		1	12		4
Out of State						**12**	**5.5**	**1**
Central Point OR			1			1		
Champagne IL			1			1		
Coeur de Alene ID				1		1		
Portland OR	1		2			3		
Rothdrum ID			1			1		
Sun River MI	1					1		
Troutdale OR			1			1		
Tutalatin OR			1			1		
Umapue OR			1			1		1
Victoria BC			1			1		
Aberdeen				1		**1**	**.5**	
Arlington			1			**1**	**.5**	
Auburn	1		1			**2**	**1**	
Belfair	1					**1**	**.5**	
Bremerton	1		4			**5**	**2**	
Chimacum	1		1			**2**	**1**	
Federal Way			1			**1**	**.5**	
Kent	1		1			**2**	**1**	
Moses Lake			1			**1**	**.5**	
Olympia			1			**1**	**.5**	
Port Orchard	1		1			**2**	**1**	
Port Townsend	2					**2**	**1**	
Poulsbo	2					**2**	**1**	
Puyallup			1			**1**	**.5**	
Quilcene			1			**1**	**.5**	
Renton	1					**1**	**.5**	**1**
Rochester					1	**1**	**.5**	
Seattle	4		1		1	**6**	**3**	
Spokane			1	1		**2**	**1**	
Sumner			1			**1**	**.5**	
Tacoma	2		4	1	2	**9**	**4**	
Tumwater	1					**1**	**.5**	
Western WA			1			**1**	**.5**	**1**
Woodinville	1					**1**	**.5**	
Woodland			1			**1**	**.5**	
Yelm	1					**1**	**.5**	

TABLE 4. Truck Origin

Origin City	Truck Configuration							
	Straight Truck	Tractor	Tractor & Trailer	Tractor with 2 Trailers	Truck & Trailer	Total	Loaded Trucks	Log Trucks
Clallam County						**127**	**78**	**54**
Port Angeles	18	1	7	1	2	29	9	1
Beaver			1		1	2	2	
Blyn			2		1	3	3	3
Carlsborg			1		1	2	1	
Clallam Bay			3			3	3	3
Deep Creek			4			4	4	4
Disco Bay					1	1	1	1
East Twin			4			4	4	4
Forks	7	1	3		2	13	6	3
Hoko			5			5	5	5
Joyce	2		2		1	5	3	2
Lake Ozette			6			6	6	6
Neah Bay		1	4	2		7	6	7
Pysht			8			8	8	8
Sekiu			4		2	6	6	6
Sequim	23		4		2	29	17	1
Aberdeen				1		**1**		
Arlington			1			**1**	**1**	
Auburn	1		1			**2**	**2**	
Belfair	1					**1**		
Bothell	1					**1**	**1**	
Bremerton	2		3			**5**	**3**	
Chimacum			3			**3**	**3**	**2**
Federal Way			1			**1**		
Kirkland			1			**1**		
Lacey			1			**1**		
Olympia			1			**1**		
Port Hadlock			1			**1**		
Port Orchard	1		1			**2**	**1**	
Port Townsend	5		12	2	1	**20**	**4**	**1**
Poulsbo	3		1			**4**	**4**	**1**
Quilcene			2			**2**	**2**	**2**
Redmond	1					**1**	**1**	
Renton	1		1			**2**	**2**	
Rochester			1			**1**	**1**	
Seattle	4		2		1	**7**	**5**	**1**
Shelton			1		1	**2**		**1**
Silverdale	1					**2**		
Sumas			1			**1**	**1**	**1**
Sumner			1			**1**	**1**	
Tacoma	3		6	8	1	**18**	**5**	
Tumwater	1					**1**	**1**	
Wilsonville			1			**1**	**1**	
Woodinville	1					**1**	**1**	
Woodland			1			**1**	**1**	
Yelm	1					**1**	**1**	
Out of State						**7**	**7**	

TABLE 5. Truck Destinations

Destination City	Truck Configuration								
	Straight Truck	Tractor	Tractor & Trailer	Tractor with 2 Trailers	Truck & Trailer	Total	Percent	Loaded Trucks	Log Trucks
Beaver WA			3			3	1.4	3	2
Bremerton WA	1					1	.5	1	
Clallam Bay WA				1		1	.5	1	
Eugene OR					1	1	.5	1	
Forks WA	2		1			3	1	2	1
Mt. Baker WA	1					1	.5		
Neah Bay WA					1	1	.5	1	
Port Angeles WA	71	3	98	18	12	202	92	119	58
Port Townsend WA	1		3			4	2	3	3
Shelton WA			1			1	.5	1	1
Tacoma WA	1		1			2	.5	1	
Victoria BC			1			1	.5	1	
Total	77	3	108	19	14	220		134	65

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Appendix C Public Involvement Program

The public involvement program for this planning study consisted of informing the public of the project and soliciting input from the citizens and identified interest groups. The goal of public involvement and citizen participation is to reach a substantial effective agreement on a recommended course of action through a strategy of developing working consensus. The program provided for establishing contacts with the community early in the study process and maintaining these contacts throughout the study. This was accomplished by meeting with local jurisdictions and agencies early in the project to describe the scope of work and schedule of the project, to ask for suggestions as to how best to include the public in the preparation of this study, and to solicit suggestions as to potential committee members.

The public involvement plan was designed to support this study and provided a blueprint for the public involvement program. The plan is attached as Attachment A.

Study Committee Meetings

A Study Committee was created in order to guide decisions and more importantly, to represent viewpoints from various jurisdictions, citizen organizations, parties and agencies that have an interest in Port Angeles. This committee met six times over a 10-month period.

- On February 17, 1999, at the Port Angeles Public Library, a planning meeting was held with local and regional agencies. The meeting determined the scope of the study and how best to conduct the project. It also established the Study Committee, both structure and membership.

- On March 31, 1999, at the Double Tree Port Angeles Hotel, there was a Study Committee meeting which included local/regional agencies, business and interest groups, and members of the general public. The committee was provided the project's background and scope at this meeting. The committee also began the process of identifying needs and issues along the corridor as well as a working Purpose and Need statement.

- On June 17, 1999, at the Vern Burton Community Center in Port Angeles, using input gained from public meetings, the committee identified the corridor's major issues and needs. From these needs the committee developed a 'working' Purpose and Need Statement and goals for the project.

- On July 29, 1999, at Clallam Transit, alternative criteria and measures of effectiveness were 'brainstormed'.

- On October 7, 1999, at the Vern Burton Community Center in Port Angeles, the committee met prior to the second public open house and finalized the criteria and measures of effectiveness to evaluate alternatives.

- On November 18, 1999, at the Port Angeles Public Library, the Study Committee reviewed and consolidated alternative strategies developed from public feedback.

Public Meetings

Two public meetings were held during the study.

- On May 15, 1999, at the Vern Burton Community Center in Port Angeles, the Project Team conducted a public meeting to acquaint the public with the purpose of the study and the study process, as well as seek input about concerns and ideas on the problems along the study corridor. Approximately 75-80 attended the public open house.

- On October 7, 1999, at the Vern Burton Community Center in Port Angeles, the Project Team conducted a public meeting as a continuing part of the public involvement process. The purpose of the meeting was to seek public ideas and suggestions on how to improve the highway. Forty people attended the public open house.

Newsletters

No newsletters were developed during this period; however, public notices were posted and mailed out announcing each of the public open forums.

Media Outreach

Press releases were made prior to both public meetings. In addition, the Peninsula Daily News newspaper interviewed the Project Team on the intent and background of the study.

Internet Access

A project web site was established on the WSDOT Olympic Region Transportation Planning Office home page. The intent of this web page was to provide information and status on the study.
(*http:www.wsdot.wa.gov/regions/olympic/planning/routedev/101*).

Comments

The following comments and issues were identified by the public during the study's public process. The listed issues/concerns have been grouped into categories to combine like issues.

Congestion

- Traffic bottlenecking/ intersection problems
- Bottleneck on west bound nearing Port Angeles
- Congestion on US 101
- US 101 east bound cannot handle current traffic volumes
- Lack of smooth transition for going through town
- Traffic conditions are not being met - too congested
- Locals using 5th Street to avoid congestion on US 101
- Lauridsen Blvd. is underutilized because Lincoln is not used as intended
- Too much traffic
- The route is lousy due to traffic
- Unending lines of traffic year round
- Port Angeles will be seen as the "bottle neck" on the peninsula – 101 is seen that way because you can only go 55 MPH – seen as congested route - difficult travel - slow down is also a plus for some tourists

Truck Traffic

- Don't like trucks through middle of downtown
- Commercial traffic in Port Angeles
- Logging trucks through/in town
- Lauridsen and Race inadequate radii for truck turns means trucks go downtown
- Safety issue at Lauridsen and Lincoln intersection (Truck turning radius)
- Road surface and design not configured for heavy truck traffic and RVs

Traffic Volumes in/through downtown

- Through traffic through downtown shopping district causes congestion and accidents
- Traffic volume through Port Angeles is too great
- Traffic goes right through downtown
- Don't like the current downtown alignment and traffic (Lincoln/Lauridsen to Del Guzzi)
- Ferry traffic in Port Angeles (too much)

No alternative route

- Morse Creek only access point
- No alternative route/access to town from the east - if problem at Morse Creek curve
- Limited alternatives to US 101
- Morse Creek flooding
- No second access from Golf Course Road to Morse Creek

At-grade crossing problems

- Lack of interchanges/overpasses/frontages roads (access problems)
- Hazardous cross traffic
- Lauridsen Blvd. and Lincoln intersection it is a mess, "Y" intersection - traffic from everywhere - "fix" makes traffic crazy
- Look into commercial sign locations - causing sight distance problems
- Intersection US 101/SR 112 redesign has not corrected safety problem

Need better directional signage

- Lack of convenient visitor information on sights to see. (Tell what route to take, needs to be improved)
- Need better directional signage - current signage poor or nonexistent
- Better directional signage needed at Lincoln/First Street
- First & Lincoln right turn lane and through lane channelization is confusing
- Inadequate directional signs (ridge, ferries, etc.)
- Confusion reference one-way streets

Traffic Signals

- Traffic lights not in sync - too much stop and go
- Truck traffic going too fast to make the grade heading east at First & Lincoln - lights timed to allow
- Traffic lights not coordinated
- Crossing lights for pedestrians too short

Turn Lanes

- Lack of turning lanes - turning lanes should be extended to Laird Road
- Some stretches are only one lane each direction

Morse Creek

- Safety concerns in the vicinity of Morse Creek
- Morse Creek Bridge icing and design
- Morse Creek "dip" gets slippery, icy, design of highway seems to cause sliding
- Snow and ice at Morse Creek
- Morse Creek safety at curve

US 101 & O'Brien

- US 101 & O'Brien intersection dangerous
- Need for traffic light at O'Brien Road

School Issues

- Crosses school zone (Lincoln)
- Conflict with school locations
- Traffic goes too close to schools

Lack of pedestrian and bicycle facilities

- Lack of pedestrian and bicycle facilities
- The Plaza de Traylors "suicide alley"; no sidewalk, no bus pullouts, no shoulders, and speeding cars
- No bike lanes
- Highway developed only for vehicles - not for pedestrians, bikes, and busses

Pedestrian/Bike routes non-existent

- Not conducive for biking
- Don't like only safe way east from downtown is auto - can't safely walk, bike, or bus (no bus pullouts)
- No bicycle lanes - especially east of Morse Creek
- Unsafe for bicyclists alongside road
- Pedestrian traffic is in danger; too easy to speed downtown on couplet
- No access for pedestrians at Deer Park and O'Brien Road
- No access for walking and bikes on Eastside

Pedestrians crossings

- Pedestrian hazard to cross couplet - US 101 & Albert increase business on couplet brings more pedestrian need crosswalks
- Difficult for pedestrians to cross Front, First, and Lincoln Streets
- Problem getting to bus stops safely (pedestrians)
- Crossing lights for pedestrians too short
- The couplet's pedestrian crosswalks too dangerous
- Pedestrians crossings all of study area is also problem - also in UGA outside city limits

Mass Transit

- Need more public transit
- No encouragement for alternative transportation

SR 117

- SR 117 limited access to US 101
- SR 117 underutilized
- SR117 intersection both ends
- No way to get to SR 117 from the east
- Lack of east/west access at US 101/SR 117
- Mix industrial recreation traffic where SR 117 meets Marine Drive (disappearing water front trail) converging lane from 3 to 2, 'T' intersection.
- No walking trail, increasing truck left turns (doesn't work)
- Access at bottom of truck route into Port Angeles (SR 117/Marine Drive) doesn't work anymore.

Poor Access onto US 101

- Access onto US 101 is bad - can't get off side streets, especially at O'Brien Road, Deer Park, Morse Creek, and Baker Street
- Limited access points to developments
- No second access from Golf Course Road to Morse Creek

Economic development

- Challenge to balance congestion, tourism, business, access, and mobility - we'll have the ferry traffic to deal with no matter what. Port Angeles is a destination
- Lack of zoning enforcement along incorporated area
- Don't like we've waited so long to address development limits option the longer we wait the harder it will be to fix

Aesthetic character/ environmental

- Deteriorating scenery - scenery along route is trashy
- Clear cutting and development is degrading the scenic value of 101
- Proliferation of commercial signage destroying scenic qualities
- Too many bulletin boards

Additional Comments

- Bigger problems on east end of town - west side functions adequately.
- Priority for west side is way lower than east side of town.
- Bypass not needed. Get US 101 to flow better.
- Need for driver education.
- Need to use existing routes that we have available. Consider winter conditions vs. elevation.
- Increase law enforcement for traffic control.
- No matter what is done there will be trucks in downtown.
- Movie trailers showing movie customers how traffic should depart Deer Park theater.
- Franklin School would be 30 feet from a proposed alternate route using Lauridsen.
- Consider the significant difference in bad weather the further you go south past Park Ave.
- The installation of the traffic light at the bottom of the truck route (SR 117 /Marine Drive) has resolved backup problems at that intersection.
- Current county policy calls for no commercial access on US 101 between Port Angeles city limits to Sequim.

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Attachment A

Washington State Department of Transportation

PUBLIC INVOLVEMENT PLAN

U.S. 101 Port Angeles Alternative Study

February 17, 1999

PUBLIC INVOLVEMENT PLAN
U.S. 101 Port Angeles Alternative Study

Introduction

This public involvement plan is designed to support a study of the U.S. 101 Port Angeles area corridor. This study is a collaborative effort to assess transportation needs along the Port Angeles portion of the U.S. 101 corridor and to identify viable transportation improvement strategies to preserve and improve regional mobility as well as improve traffic circulation and safety within and around the Port Angeles region. Active public participation throughout the process will be key to the overall success of the public involvement program.

As this project reviews ideas that may affect the general public within the corridor area, it is essential to provide public awareness of the project. It is also vital to receive and address the concerns and suggestions of the public. This plan strives to involve the public at all stages of the planning process. This plan is the blueprint for a public involvement program that seeks to achieve the following goals:

- Create an open and on-going, two-way communication process between a wide public constituency and the project management team.
- Provide opportunity for public input early in the process and continuously by making information on the process and the particulars of the plan conveniently available before decisions are made.
- Obtain timely and accurate feedback from the public, especially before significant decisions are made.
- Provide multiple avenues for interested citizens and groups to communicate their views.
- Document the public involvement process.

Although this plan described the layout for public involvement activities, it is intended that this be a dynamic process. This plan is a flexible document and will be adjusted as needed. New strategies that will assist in meeting the program's goals will be added to the plan included as needed. The effectiveness of the plan will be reviewed after each decision point.

Public Involvement Activities

Stakeholder Committee

A Stakeholder Committee composed of affected jurisdictions, interested groups, and concerned citizens will form to determine the issues that will be addressed. The WSDOT will manage the project as well as coordinate the Stakeholder Committee. Stakeholder

meetings will be planned at all decision points in this analysis process, in order to get input into critical decisions.

The assembled Stakeholder Committee will be composed of appropriate staff from Clallam County, the City of Port Angeles, Port of Port Angeles, Clallam Transit System, Olympic National Park, and others. The WSDOT will, with input from regulatory agencies, insure all that should be a necessary part of the group are included.

Stakeholders' perspectives will vary based on the potential impacts of various alternative to their specific areas of interest. Communications with each group should correspond with their desired level of involvement and the project impacts. The following is a list of groups identified to date that may have a direct interest in the project:

- Property Owners/Businesses adjacent to U.S. 101/SR 117
- Neighborhood Communities
- Elected and Appointed City and County Officials
- Local and Regional Agencies
- Civic Organizations
- Users of the Road
- Property owners/Businesses potentially affected by any proposed alternative(s) under analysis.

A Stakeholder roster will be produced listing names of members and whom they represent. Although there will be no public comment at Stakeholder Committee meetings, all committee meetings will be open to the public.

Public Meetings

Public meetings will be necessary to inform the public about the project and gather input. Public Meetings will be planned and located as necessary. Although meetings will be part of the public process, they will not be the only opportunity for public participation.

Public meetings will be conducted in an open-house format to provide the greatest possible opportunity for the public to meet with the WSDOT and Stakeholder Committee members working on the project, review work in progress, and comment on issues under consideration. This format will allow the public to view graphs, fact sheets, charts, maps, and other media that convey the work to date and provide comments on the alternatives under consideration.

Meetings will be scheduled at key points during the process. The first meetings will provide opportunities for the public to comment on the purpose and need statement, identify problems, develop solution alternatives and evaluation criteria. The second round of meetings will provide opportunities for public comment on the alternative analysis leading up to a set of preferred alternatives.

Public meetings will be structured to provide multiple opportunities for attendees to express their preferences and ideas, both verbally and in writing. Comment forms will be distributed

to obtain input regarding the project's goals, needs, alternatives, and recommendations. All comments will become part of the official record and will be appended to the report.

The times, dates, and locations of the meetings will be publicized in a number of ways. A calendar of project events will be published in newsletters and on the WSDOT Olympic Region Internet Web Site. Public meetings will also be advertised at least one week in advance of each meeting in area newspapers.

Public Notices

Announcements in newspapers with local and regional circulation will serve as official public notice for public meetings and comment periods throughout the process. In addition to newspaper ads, public meetings will be announced in community calendars, posted at public places (local area bulletin broads, etc.), included in the project newsletter, and posted on the project web site when possible.

Internet Access

A project site on the WSDOT Olympic Region Transportation Planning Office Home Page will be developed and maintained to provide basic information about the project and to provide members of the community an opportunity to comment on the project. Links to this page from other well-known sites will be pursued. E-mail addresses for information requests and public input will be included in all project-related materials produced. The project's Internet Web page site will be in-place throughout the duration of the project.

Mailing List

The WSDOT management team will develop and maintain a mailing list database for this project. Stakeholder Committee members will also be asked to provide names to be included in the database. All participants in public meetings or those who request to receive information about the project will be included in the project database. Newsletters and other information will be distributed based on the database information. The database will be maintained, expanded, and revised as necessary throughout the project.

Newsletter

Informational newsletters will be published during the corridor study. These newsletters will provide information on the progress of the study, public involvement activities, revised schedules related to the project, and responses to public concerns. The newsletter will be made available to the public throughout the life of the project.

Copies of the newsletter will be made available and distributed, via general post, to provide information explaining the study to the general public. The newsletter will also provide opportunities for public comment, include the location and time of scheduled open houses and the name, address and telephone number of the WSDOT management team. Newsletters

will also be provided in bulk to the Stakeholder Committee members for their targeted distribution.

Presentations/Briefings

Presentations and briefings involving local jurisdictions, public agencies, and interested groups along the U.S. 101 corridor and the surrounding project area will be coordinated. Materials providing information that speaks to the particular information needs of the group will support presentations. These presentations are intended to build community support for the need and understanding of this specific project and road improvements in general.

Media Relations

Information about the project status will be provided to the media through the Olympic Region Public Information Office.

Other Information Tools

The techniques described above will contribute to the success of this program; however, to achieve the plan's goals other methodology will be considered in order to involve the public at all stages of the process. Every effort will be made to present information to the public in an easily understood format. Visuals, fact sheets, maps and graphic depiction of the analysis will be prepared for use at public meetings